CHAPTER I

INTRODUCTION

Today's fire service leaders are challenged with the task of providing the public with a fast, safe, effective and economic emergency mitigation response force, as well as contemporary life safety education and prevention services. In many jurisdictions, service demands are increasing more rapidly than that region's population. Compounding the challenge is the trend in the fire service to provide an increasingly wider scope of services to a citizenry relying on their fire department as an "all risk" public agency…no matter what goes wrong (Granito, 1995; Lavoie, 1995; ICMA, 1999). At the helm of every fire department in California a single individual, the fire chief, is ultimately responsible for the administrative duties, operational effectiveness and efficiency, and safety of the public and firefighters as specified by applicable laws, local ordinances, and industry standards. Pertinent to this Dissertation, the fire chief is also the formal leader of the organization and in that role can provide great influence over the vision, direction, values, motivation, tone, and pace of the department.

To secure the resources needed to fill this role, fire service leaders must compete with other public service providers, each also searching for available resources and support. In addition, many public officials are looking for ways to provide enhanced services through quality improvement (Koehler and Pankowski, 1997). Several local government organizations

have begun to use benchmarking and self-assessment as methods to evaluate their performance and provide innovative solutions to difficult problems (Osborne and Plastrik, 1997; Wray and Hauer, 1996).

Fire chiefs and their executive staff can play an integral role in bringing about change in their departments' service delivery mechanisms. With the increased emphasis on improvement, fire service administrators are called on to lead their agency's operations to higher levels of service quality and performance.

In a study at the National Fire Academy, DiPoli (1994) found that the tenure of fire chiefs in the United States is far shorter than it once was. He attributes this finding to stress, mid-life crisis issues, and education/upward mobility. In another study of similar public administrators, Wheeland (2002) found the median length of service for city managers to be less than five years, with an average of 7.3 years. Due to the seemingly limited opportunity many fire chiefs have to impact the success of their department, the importance of gaining further knowledge of leader effectiveness is not an insignificant finding. Considering the effort of local leaders to select the "right" fire chief to head a fire department; or the emphasis in schools of public administration to train future public leaders, would it not be worthwhile to study the relationships between characteristics of practicing fire chiefs and their effectiveness?

Research Questions

This Dissertation examines leadership effectiveness at the fire chief level in local government fire departments in California, identifies characteristics of these chief officers related to effectiveness, and examines the relationship

between leader effectiveness and organizational performance. Therefore, the following critical questions guide this research.

1. What areas of fire department administration capture the attention of today's fire chiefs?
2. What are the relationships between fire chief characteristics and their perceived leadership effectiveness, as viewed by their followers?
3. What are the relationships between fire chief's leadership effectiveness and measures of organizational productivity?

This research is limited to a study of fire chiefs in California; therefore, some background of the structure of California's fire service is in order.

California's Fire Service

In California, there are nearly 1,100 fire departments, including numerous state fire departments, i.e., California Department of Forestry and Fire Protection and the University of California, county fire departments, local government fire departments, i.e., cities, towns, and special districts, and private fire brigades. Additionally, there are a number of federal fire departments protecting military installations and federal lands contained within the state.

Fire departments in California are interconnected and interdependent. Interconnectedness is manifest through statewide agreements to provide mutual aid resources when communities are threatened by large scale emergencies or have other specific resource needs. The Governor's Office

of Emergency Services coordinates all mutual aid resource deployments at the state level through a system supported by local governments. The interdependency among fire departments stems from recognition that no jurisdiction is an island when emergency resources are challenged beyond a local agency's ability to fulfill the need. It is commonplace for emergency resources to move across jurisdictional boundaries to provide the closest, most appropriate resources for the need. This seamless response, which is generally unseen by the citizen, provides an increased depth of resources and also increases the type of resources available to any one fire department.

Background of the Problem

For the past twenty-five years, many local agencies have faced limited budgetary growth which has required innovative measures in funding service delivery. For local government service providers, fire department revenues are generated primarily from sales taxes or real property taxes. Since the 1976 passage of the Jarvis-Gann tax initiative, known as Proposition 13, property tax revenues in California have been limited by state law; they increase at the rate of inflation or a maximum of 2% per year (Chapman, 1998). This limited resource stream has forced local government service providers to search for ways to maintain service effectiveness and efficiency under strong societal pressures toward economic efficiency and cost containment (Kirlin, 1982; Chapman, 1998; Poister and Streib, 1999). However, maintaining the status quo in service delivery is not an acceptable

alternative in a society where people expect ever-quicker responses and consistent or increasingly higher quality services (ICMA, 1993). Public organizations, now more than ever, must be concerned with effective leadership and improved performance.

Until the 1970's, the fire service in the United States was primarily charged with the control of fires in America's cities, rural communities, and forests. In addition, civilian rescues from buildings and entrapments using rudimentary tools were considered part of the fire department's duty. Following the Viet Nam War, fire departments began providing emergency medical services using field treatment methods tried by the military. Emergency Medical Services (EMS) has since grown in scope and volume to include paramedic level of treatment on fifty to eighty percent of the call volume for most fire departments in the state.

Other service areas have become standard fare for many fire jurisdictions. These added responsibilities include: auto extrication, hazardous materials mitigation, weapons of mass destruction preparedness and response, aircraft rescue and firefighting, technical rescue, medical transport, and water rescue. With each new discipline or service area, firefighters are required to obtain and maintain new skill sets, and fire departments must purchase new equipment and apparatus. Additionally, some new service areas require changes in organizational structures and new managerial requirements.

Competition from the private sector and other public agencies, combined with demands from the citizenry for higher levels of performance and greater economy are pushing many organizations to their perceived limits (Osborne and Gaebler, 1992; Osborne and Plastrik, 1997). Organizations that have learned to cope with changes in their environment and are willing to adapt by altering the organization's culture, by redefining service delivery expectations and eliminating waste can survive such threats. The three "E's" remain applicable to today's organizations: effectiveness, efficiency, and economy.

The fire service is not exempt from these pressures and will increasingly rely on its senior executive officers to provide exemplary leadership. Difficult choices lie ahead for California's fire service leaders. These new challenges require fire leaders to move outside their own field and be proficient in concepts of regionalization, intergovernmental relations, marketing, management information systems, and maintain not just state, but national and international networks.

Furthermore, this Dissertation is set in a time in the history of the United States fire service when homeland security is threatened. Members of every local fire department in America have witnessed 343 of their fellow firefighters give the supreme sacrifice in efforts to rescue the public. If the importance of the role of fire service leaders was in some way diminished or considered less than a top priority before September 11, 2001, let it never be so again.

Purposes of the Study

Imagine if one could develop a perfect match between an individual leader's character, skill sets, cognitive abilities, traits, and timing and the organization's mission, needs, constraints, culture, opportunities, and workforce. Impossible, perhaps, although history provides ready examples of leaders who come into organizations and together, produce legendary results.

The purposes of this study are to first identify what fire leaders from selected departments across California say are the leading problems they face and also relay the measures of effectiveness these chiefs value as significant. Second, this study relays the collective advice of over 100 senior active fire officers on what a fire chief assuming command of a department should do to become a more effective chief. Third, the relationships between fire chief characteristics and the leadership dimensions of mission accomplishment, empowerment, relationship, team building, and personal character are examined and discussed (Gilbert, Hannan, and Flaggert, 2000) . Finally, a subset of the fire chiefs' effectiveness scores is compared to their department's performance in selected areas.

Assumptions

In studying fire service leadership effectiveness and organizational performance, this researcher makes the following assumptions.

Assumption 1: Leadership plays an important role in the performance of organizations.

Assumption 2: Followers' perceptions of leadership effectiveness can be measured.

Assumption 3: All organizations can improve the quality of service delivery.

Assumption 4: Continuous quality improvement in public organizations is in the best interest of furthering the public good.

Assumption 5: Survey participants completed written surveys truthfully.

Assumption 6: Field interviews yielded accurate reflections of the participant's views.

Limitations

Every research project faces self-imposed and external constraints on its breadth and depth. The following areas are recognized limits on this study.

1. Only California fire departments were selected for the study.
2. Only departments participating in at least one of the International City/County Managers Association Comparative Performance Reports were considered for the study.
3. A purposive sample of fire departments participating in the ICMA Comparative Performance Measurement studies and contributing organizational productivity measures was used.
4. Since this study was done using a limited sample of California fire chiefs, the results may not be representative of fire chiefs in California as a whole.

5. Fire chiefs were given the option of participating in the survey via the US Mail or via personal site visits by the researcher.
6. The survey is not a longitudinal study; both mailed surveys and site visits were limited to a one-year period.
7. Only one participating fire chief was female. Therefore, generalization of results to female fire chiefs should be made cautiously, if at all.
8. This study collected limited data on factors influencing organizational climate and change. Therefore, further study should be done in this area to determine the effects of these factors on leadership effectiveness and organizational performance.

Definitions

Benchmarking- Comparing performance across organizations to measure one's own achievements and identify ways to improve (ICMA, 1993).

Chief Officer- A fire officer who has attained the rank of battalion chief, assistant chief, division chief, deputy chief, or fire chief.

Continuous Quality improvement- "The focused diagnosis of barriers to better performance, followed by the design of alternatives to remove or circumvent those barriers, the implementation of trials to test those alternatives, and finally the expansion of successful trials to raise performance levels while shrinking variability in performance" (Affholter, 1994; 101).

Empowerment Behavior- (EMPB)-Leadership behaviors that include "calming influence, delegation, organizational followership, and straightforwardness" (Gilbert, Hannan, and Flaggert, 2000).

Engine company- A crew of firefighters (2-4), led by an officer (captain or lieutenant) with the purpose of responding to and mitigating a wide variety of emergencies. At the scene of a working structure fire an engine company may be assigned to provide water supply, initiate fire attack, perform search and rescue, aid in salvage operations and in overhauling the building.

End outcome-"The end result that is anticipated or desired" (ICMA, 1999).

Fire Chief- The chief executive officer in a fire department.

Fire engine- A piece of fire apparatus designed to carry firefighters and equipment to emergency scenes. Fire engines typically have a water tank, fire pump, fire hose and nozzles. The primary purpose of fire engines at the scene of a working fire is to secure a water supply and provide a constant, pressurized supply of water for fire streams.

Fire truck- A piece of fire apparatus designed to carry firefighters and equipment to emergency scenes, typically having a compliment of ground ladders, an aerial ladder or platform, and specialized rescue equipment. The primary purpose of fire trucks at the scene of a working fire is to provide access and egress from elevated areas of the building and to use the ladder or platform for elevated master stream application.

Input- "Resource used in producing an output or outcome" (ICMA, 1999).

Intermediate outcome- “An outcome that is expected to lead to a desired end, but is not an ‘end’ in itself” (ICMA, 1999).

Leadership- Leadership is developing effective and mutually satisfying relationships that create and achieve common goals (results) through others by providing a better construct of today and an improved vision for tomorrow.

Learning organization- An entity that consciously increases its capacity to improve its performance (effectiveness, efficiency, and economy) by using processes that build upon its shared knowledge, experience, and memory.

Mission Oriented Behavior (MOB) Leadership behavior that includes “forcefulness of presence, industriousness, dependability, and authoritativeness” (Gilbert, Hannan, and Flaggert, 2000).

Outcome- “An event, occurrence, or condition that is outside the activity or program itself and that is of direct importance to clients and the public. The outcome indicator is a measure of the amount and/or frequency of such occurrences. Service quality, such as timeliness with which the service was provided, is an important aspect of outcome measurement” (ICMA, 1999).

Output- “Completed activity. Outputs refer to the results of internal activity: the amount of work done within the organization” (ICMA, 1999).

Performance indicator- “A specific numerical measurement for each aspect of performance that is under consideration” (ICMA, 1999; 6).

Personal Character (CHAR)-Leadership “behavior based on integrity, morality, and ethical conduct” (Gilbert, Hannan, and Flaggert, 2000).

Management- The coordinated use of personnel and resources to achieve organizational goals and objectives.

Public good- That which benefits the people, as a whole.

Public leadership- Leadership activities set in the context of political, governmental, and nonprofit institutions and organizations.

Relationship Behavior (RELB)- Leadership behaviors that include being a "partner, friend, enjoyableness, and organizational outreach" (Gilbert, Hannan, and Flaggert, 2000).

Team Building Behavior (TBB)-Leadership behaviors relating to teamwork and building on the talents of all on the work team (Gilbert, Hannan, and Flaggert, 2000).

Truck company- A crew of firefighters (2-6), led by an officer (captain or lieutenant) with the purpose of responding to and mitigating a wide variety of emergencies. At the scene of a working structure fire a truck company may be assigned to establish an elevated master stream, ladder the structure, search and rescue, perform ventilation, salvage, extrication, and overhaul.

Organization of this Dissertation

This Dissertation has been organized into the following chapters:

- Chapter II provides the framework for this study and a review of relevant literature on the topics of leadership, public leadership, leadership effectiveness, and organizational performance.
- Chapter III details the research methodology.

- Chapter IV integrates the findings of the field interviews with a presentation of the quantitative findings. This chapter provides a qualitative representation of thirteen site visits wherein the researcher interviewed department chiefs, and their senior staff. In doing so, useful information on trends in California's fire administration facing today's chief officers is presented.

  Chapter IV also presents the findings of the Leadership Effectiveness Assessments (LEA's) and addresses a proposition postulated on the relationship between perceptions of leader effectiveness and follower productivity. Additionally, Chapter IV uses quantitative techniques to determine statistical relationships between leader effectiveness measures and leader characteristics. Finally, findings on the fire chiefs' aggregate Leadership Effectiveness Assessment scores and their relationship to organizational performance are examined.

- Chapter V concludes the Dissertation by integrating the findings into a presentation of contemporary fire service leadership strategies, summarizes the theoretical contribution of this Dissertation, presents a unique frame for performance leadership, and provides recommendations for expanded research in this topic.

CHAPTER II

LITERATURE REVIEW

Introduction

Leadership has been an observable element of human endeavor since our earliest beginnings. Whenever people begin to organize themselves into groups, individuals ascend to positions of power, dominance, rule, or authority over others. Even the animal world provides many examples of species where individual leaders emerge and provide discipline, order, and guidance to the herd. Organization theorists began to differentiate leadership from management activities and competencies as early as the late twenties (Follett, 1925; Barnard, 1938; Bennis, 1989; Hyde, 1997).

This chapter identifies pertinent historical theories of management and leadership. Also, attention is given to leadership as an activity in public organizations. An introduction into the current work being done in the area of performance measurement and this topic's relevance to this study will then be presented. Finally, a review of fire service leadership and the present state of performance measurement in the fire service community will conclude the chapter.

A Brief History of Management and Leadership Literature

Early discussions of leaders and leadership were mostly confined to religious, political, or military roles (Machiavelli, 1961; Schwartz, 1982). The traditional/historical view of leadership categorizes leaders as being

charismatic, traditional (according to Weber, the traditional leader was one who was a leader by dint of heredity and class), legal/rational (Weber, 1946); and titular (Mooney describes a titular leader as one who "follows his/her staff's advice undeviatingly and hence was not much more than a figurehead.") (Mooney and Reiley, 1939). From the 1890's, with the Industrial Revolution and the desire to make management a scientific and rational enterprise until the late 1940's, Scientific Management dominated as the leading organizational theory. Under this theoretical framework managers were recognized as the "official and authorized" leaders of organizations and were expected to plan, organize, staff, direct, coordinate, report, and budget (POSDCORB) (Gulick, 1937).

This management/leadership framework remains part of the fire service command and control approach to handling large and small emergency incidents. Incident Command System (ICS) principles remain rooted in Classical Management theory as a way of establishing a chain of command, maintaining a span of control, obtaining technical efficiency, dividing and coordinating work (Gulick, 1937) and maintaining order in a chaotic environment.

However, there were a few early voices that recognized the importance of "how leaders lead" in modern organizations (Follett, 1927; 1928; Barnard, 1938). Unlike prior work on leadership, a change in thought about the relationship between leader and follower began to surface, although these views were not acted upon until after World War II (Follett,

1925; 1927; 1932). This shift in views occurred along with rise in the Human Relations perspective on organizational behavior (Maslow, 1943; McGregor, 1957). An example of this shift is the notion that rather than “power over”, “power with” was considered more appropriate (Follett, 1925). Barnard’s (1938) idea that leaders are given authority to govern by the consent of those governed had not begun to gain acceptance in organizations until recent times (Bennis, 1989). The tenets of Follett’s work surfaced many years later under the label of participative management.

In the study of modern organizations, many now take the behavioral view and argue that leadership is about inspiration, collaboration, motivation, and vision setting (Bennis, 1989; Gardner, 1990). Fire service executives join other organizational leaders in sharing common leadership activities including setting direction, aligning and motivating people, and creating a culture of leadership (Collins, 1996). All of these tasks rely on a deep understanding of human beings, their needs, desires, and limitations.

By 1990, the fuzzy line between management and leadership became more distinct (Kotter, 1990). According to Kotter, management activities primarily cope with handling “complexity” within organizations, while leadership activities cope with “change” (1990; 104). The primary drivers bringing about change are technology, social diversity, economic developments, and shifts in worker attitudes and expectations. Although Kotter and others (Cohen, 1993) have helped distinguish between management and leadership, one should not be placed over the other in

importance to the organization or in achieving improved performance. Management and leadership activities go hand in hand, splitting them apart and raising one over the other would separate the "idea from the means to realize it" (Krantz and Gilmore, 1990; 202). Warren Bennis provides a concise list of differences between managers and leaders (1989).

- The manager administers; the leaders innovates.
- The manager is a copy; the leader is an original.
- The manager maintains; the leader develops.
- The manager focuses on systems and structure; the leader focuses on people.
- The manager relies on control; the leader inspires trust.
- The manager has a short-range view; the leader has a long-range perspective.
- The manager asks how and when; the leader asks what and why.
- The manager has his eye always on the bottom line; the leader has his eye on the horizon.
- The manager imitates; the leader originates.
- The manager accepts the status quo; the leader challenges it.
- The manager is the classic good soldier; the leader is his own person.
- The manager does things right; the leader does the right thing.

Bennis states, leaders, not managers, and leadership activities, not management activities are the behaviors that will be the catalysts in

organizations to solve the complex problems of our society. For this researcher, leadership and management are inexorably linked as nearly simultaneous sets of activities and behaviors that those in charge of organizations must weave into their daily practice. It is only for greater explication and understanding of leadership effectiveness, specifically, that one and not the other is the focus of this work.

While management and leadership activities within the organization can be accomplished by single actors, they are increasingly being done in teams (Gardner, 1990; Rainey and Watson, 1996). Total Quality Management is based upon the concept of teams throughout the organization working together to solve problems, develop efficiencies, and improve performance. This concept of team action characterizes the majority of fire department activity at the line level. Administrative collaboration is also commonplace in fire departments; however, no cases were found of fire leadership at the CEO level wherein a group of equally powerful cohorts performed as a team, council, or board.

Fire departments are team-oriented agencies organized at their lowest levels in two to six member companies staffing engines, trucks, ambulances and other resources designed to deliver emergency responses. For larger, more complex incidents the companies come together and form Divisions or Groups to again, collectively and collaboratively mitigate emergency incidents. Even at administrative levels of the organization, individuals come

together to collaboratively work on policy, project or program development and implementation.

This study is interested in leadership effectiveness and the necessary behaviors to affect organizational performance (Williams and Cothrel, 1997). Increasingly, researchers are examining leadership effectiveness as it relates to organizational performance (Cohen, 1993; Kolb, 1995; Sleeth and Johnston, 1996; Bass, 1997; Luke, 1998; Ackoff, 1999; Waldman, 1999; Brunacini, 2000; Masi and Cooke, 2000; Silverthorne and Wang, 2001; Waldman, Ramirez, House and Puranam, 2001; Kayworth and Leidner, 2002) The literature identifies several behaviors, which contribute to the successful exercise of leadership within the organization (Bass, 1985; Bennis, 1989; Phillips, 1993; Lynn, 1996; Radin, 1997; Behn, 1998).

Silverthorne and Wang (2001) reported, “the most effective leaders are those capable of using different leadership styles in response to the demands of the situation and to the fluctuating maturity levels of their subordinates.” The focus of these authors is on flexibility in the leader’s response or strategy to the situation. Due to increased instability and ambiguity, Blunt and Hugh (1997) and Goleman (2000) report that more flexible and innovative leaders who can comfortably move between leadership approaches are needed, rather than leaders who are satisfied with maintaining efficiency and incremental improvements in their organizations.

Bolman and Deal (1997) use a “frames” approach to describe how leaders must be competent in different approaches to be effective. Their frames include the human resource, structural, political, and symbolic. These authors “found that the ability to use multiple frames was a consistent correlate to effectiveness. Effectiveness as a *manager* was particularly associated with the structural frame, whereas the symbolic and political frames tended to be the primary determinates of effectiveness as a *leader*” (1997; 278).

Situational leadership, as researched by Hersey and Blanchard (1998), is a practical and easily understood approach supporting the leader’s need for flexibility under varying circumstances. This approach requires leaders to develop an internal capacity to respond with a ready set of tools. In Kayworth and Leidner’s study of leadership and virtual teams, they point out that leadership effectiveness is enhanced when leaders increase their “behavioral repertoires (behavioral complexities) as evidenced by activities related to tasks (role clarity and communication) as well as relationships (mentoring, understanding, and attitude)” (2002; 22).

As Kaplan notes, “Give a small boy a hammer, and he will find that everything he encounters needs pounding” (Kaplan, 1963; 28). The same holds true for leadership tools; if one has but a singular approach, each situation will be handled with little variation.

Fire service leaders who can innovate and develop ideas, skillfully deal with and rely on people, win and hold trust, eagerly accept

responsibility, develop task competence by having knowledge of the whole system, understand the needs of constituents, and “do the right thing” rather than just “do things right” are better prepared to help move their organizations toward improved performance (Bennis, 1989, Gardner, 1990).

Researchers continue to search for that right formula to help us understand and develop effective leadership in organizations. The previous few pages have touched on the roots of modern leadership; yet, recent research in the areas of leader member exchange theory, and transactional and transformational leadership offer alternatives and options. Instead of seeking “one best way”, theorists ask those charged with the leadership of organizations to consider self, tasks, culture, stakeholders, environment, time, and destination as they craft their leadership responses. These theoretical approaches move from the notion that the focus should be on the leader’s traits or style, or the application of leader influence over the work process and, instead emphasize follower interaction and organizational outcomes.

Leader Member Exchange Theory

More recent studies of leader member exchange theory (LMX) suggest an evolving leader-member relationship that moves through three phases including stranger, acquaintance, and partner. As the relationship progresses, the exchanges grow from scripted, one-way, low quality, and self-oriented to negotiated, reciprocal, high quality, and group oriented (Northouse, 2001). This descriptive theory helps explain the significance of

specific relationships between leaders and followers in achieving organizational outcomes and follower satisfaction. Bolman and Deal (1997) argue, "leadership is not simply a matter of what a leader does but also of what occurs in a relationship" (296).

More so than in previous leadership work, LMX theory introduces the intuitive concept that not all members of the organization achieve the same quality LMX. Those work units in the organization who have developed a higher quality LMX relationship between the leader and employees seem to contribute more and get more done. Those members engaging in a lower quality LMX are reported as merely completing their formal role obligations, with similar actions on behalf of the leader (Northouse, 2001). There is a substantial body of research that supports the view that LMX theory is positively related to organizational performance by way of "higher job satisfaction, stronger organizational commitment, and better subordinate performance" (Yukl, 1998).

Figure 1 illustrates the triad of leader, in-group members, and out-group members described in LMX theory. The character of the relationship between each actor is emphasized in the figure. As with other leadership theories presented in this chapter, the general objective of LMX theory is improved organizational effectiveness and achieving leader/follower needs satisfaction.

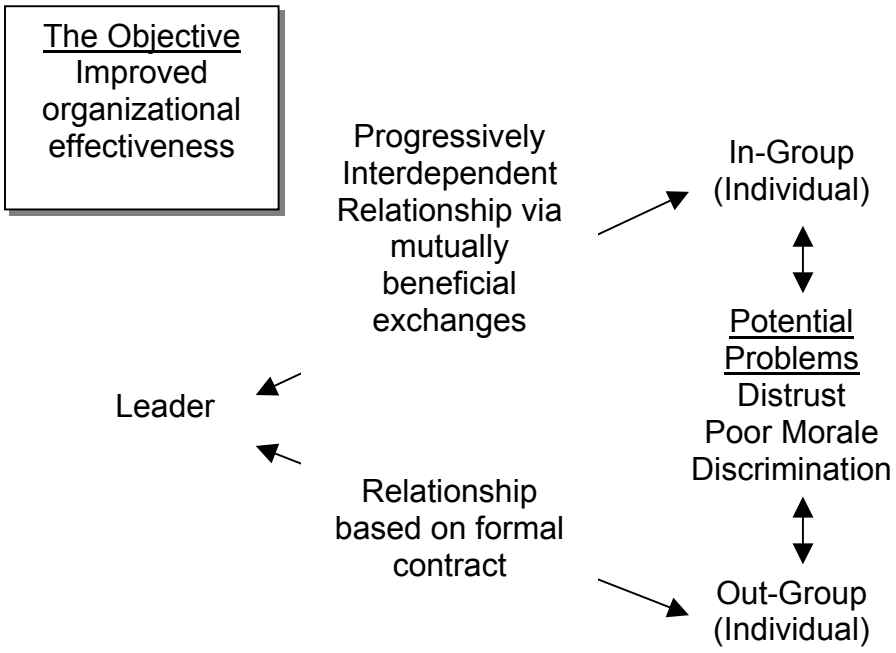


Fig. 1. LMX Theory – Leader/Member Exchange Relationships

Graen and Uhl-Bien's recent work (1995) has become more prescriptive concerning LMX theory; these authors argue that leaders should try to develop quality exchanges with all their subordinates by creating methods for employees to freely enter the in-group. In organizations with a small number of direct reports this is feasible; however, leaders who attempt to extend this theory into larger groups may have difficulty because of the increased demands of time and energy on the leader.

The biggest criticism of LMX theory is the observation that the theory runs counter to principles of fairness among subordinates and is discriminatory by providing increased access and opportunity for one group and adheres to formal organizational expectations with another group (Graen

and Uhl-Bien, 1995). In-groups and out-groups are described as being part of the make-up of the organization and can come into conflict if disparity of treatment is recognized by the out-groups. LMX theory does not prescribe inequitable treatment, but rather illustrates how these exchanges occur. There is no doubt that the constraints on a leader's time and ability to personally interact with every follower are real and need to be considered in the use of this theory.

LMX theory, considered in its initial phase, is much like transactional leadership; leaders and followers use exchanges to achieve mutually beneficial outcomes. The next section examines transactional leadership as the second of three theories that this study uses to study leadership effectiveness.

Transactional Leadership

When Chester Barnard (1938) discusses the principles of cooperative action, he defines effective cooperation in organizations as efforts relating "to accomplishment of objectives of the system and is determined with a view to the system's requirements, efficiency relates to the satisfaction of individual motives" (56). Barnard's observations, in 1938, of the necessary connection between satisfaction of organizational objectives and individual motives set a foundation upon which transactional theorists could build.

Barnard includes three areas that provide individual motivational satisfaction. These three areas are social, biological and physical. Individual satisfaction is derived from achieving rewards from among these three areas.

Under this model of transactional leadership, the leader achieves organizational objectives by entering into a dyadic relationship with the follower and exchanging contingent rewards for performance. Over time, trust can be developed; the relationship between the leader and close followers is based upon successful transactions (Waldman, 1999).

Bass (1997) identifies the following factors of Transactional Leadership.

- Contingent reward: The leader gives the follower a clear understanding of what needs to be done and or what is expected of them, then arranges to exchange rewards in the form of praise, pay increases, bonuses, and commendations.
- Management–by-exception: When it is active, the leader monitors the followers' performance and takes corrective action when mistakes are detected. When it is passive, the leader intervenes only if standards are not met or if something goes wrong.
- Laissez-Faire Leadership: Leadership is not attempted. There is abdication of responsibility, indecisiveness, reluctance to take a stand, lack of involvement, and absence of the leader when needed (25).

There are two areas of Transactional Leadership theory this researcher questions. That is, the focus of management by exception on the leaders' negative correction and intervention only when something goes wrong. The second area is the inclusion of Laissez-Faire Leadership as an element in the theory.

Management by exception is an accepted element of Transactional Leadership Theory literature. However, when discussing this particular exercise of Transactional Leadership, Yukl (1998) and others (Bass, 1985, 1996; Northouse, 2001) do not include opportunities where the leader would

intervene when he/she sees something go right and provide positive reinforcement and praise under passive management by exception. Neither do they detail leadership behaviors, which would monitor followers' actions and provide supportive and mentoring actions to reinforce positive progress or achieved milestones. These types of leader behaviors alter the thought that some authors (Lichtenstein, Smith, and Torbert, 1995) attribute to Transactional Leadership as a style that is opportunistic, manipulative and deceptive.

The second area of Transactional Leadership Theory that seems counterintuitive is the inclusion of the "nonleadership" behavior, Laissez-Faire Leadership (Yukl, 1998; Bass, 1985, 1996; Northouse, 2001) in the literature. Leadership, by most accepted definitions includes some element of action on the part of the leader. As a category of Transactional Leadership, its inclusion adds little to the understanding of this theory. As a type of formal leader/manager behavior, it perhaps provides a descriptive contribution to understanding the abdication of any leadership style or approach.

If one were to use the argument that non-decisionmaking is a form of decisionmaking, absence of leadership is a form of leading. This researcher would disagree. Choosing to defer or consciously not make a decision is a choice which in many cases has merit considering the lack of available options, changing environments, options not being within the decision maker's authority, or decisions to remain with the status quo. However,

choosing not to lead is not leadership (Ackoff, 1999). Leadership does not exist if one does not provide the personal ingredients of leadership proposed by Warren Bennis (1989); namely passion, integrity, trust, curiosity and daring, combined with the behaviors that communicate vision, motivate followers, shape culture, and model the ethical code of the organization. This criticism is not offered to deconstruct a valuable theory, but rather, to refine and broaden the scope of prescriptions that leaders could expect to integrate into their practice.

The components of transactional leadership can be illustrated through the following Figure 2.

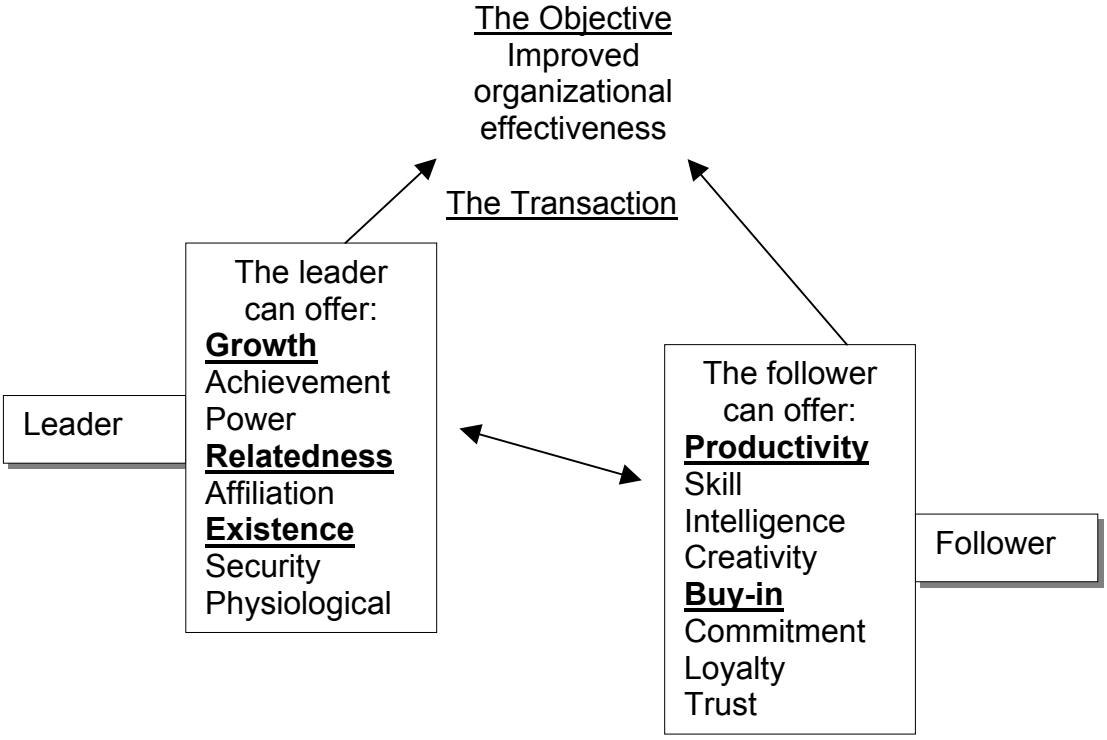


Fig. 2. Transactional Leadership Theory

Yukl (1998) describes transactional leadership as one, which motivates followers by appealing to their self-interest. He states,

"Transactional leadership involves values, but they are values relevant to the exchange process, such as honesty, fairness, responsibility, and reciprocity" (325). Yukl's inclusion of these values in transactional leadership theory supports Barnard's concept of social efficiency exchange in achieving individual satisfaction through cooperation. Most importantly, the theoretical contribution by Yukl to include values, rather than just power, position, or things in the leader/follower transaction begins to make it more like transformational leadership.

Transformational Leadership

A useful development during the 1980's in the study of leadership is the transformational leadership approach (Burns, 1978; Tichy and Ulrich, 1984; Bennis and Nanus, 1985; Gardner, 1990; Tichy and Devanna, 1990; Rago, 1996; Rainey and Watson, 1996;). This approach aids in understanding how senior managers work in organizations to bring about major changes in worker attitudes and assumptions and develop commitment to the organization's mission, objectives, and strategies.

There are some familiar historical roots to transformational leadership. It should be noted that transformational leadership resounds to discussions of empowerment, sense of ownership, power sharing, mutual trust, and participative decisionmaking expressed during the 1960's (McGregor, 1957; Argyris, 1964; Likert, 1967).

Rainey and Watson (1996) argue that transformational leadership departs from transactional leadership because the latter accepts the

organizational structure and conditions and works within those confines. Transformational leadership moves beyond those constraints and challenges the leader to use charisma, provide individualized consideration, and develop intellectual stimulation to renew and reinvigorate the organization (Tichy and Devanna, 1986; Yukl, 1989). Individual transformational leadership behaviors include:

1. Developing a vision, by examining the past experiences, present situations, and the future goals of the organization. Then, communicating an improved future state of the organization deriving from that vision. And finally, institutionalizing the vision (Bennis and Nanus, 1985).
2. Communicating the vision to others in ways that provide meaning to their work (Bennis and Nanus, 1985).
3. Recognizing and acting on the need for revitalization (Tichy and Devanna, 1986)
4. Institutionalizing change to achieve lasting benefit beyond the tenure of specific actors (Tichy and Ulrich, 1984; Tichy and Devanna, 1986).

The transformational leadership approach builds on and incorporates many characteristics of previous theories in leadership such as trait, power, behavior, and situational. Whereas prior leadership approaches attempted to slice the study of leadership into separate, more attainable pieces for examination, House (1977) argues transformational leadership recognizes the complexity of human leadership and attempts to bring those factors into consideration under one theoretical framework. Williams and Cothrel (1997)

state this leadership approach develops empowering systems wherein organizational members are involved in leadership and decisionmaking processes themselves (Koehler and Pankowski, 1997). Bass (1997) defines the following factors of transformational leadership.

- Idealized influence (Charisma): The leader shares a vision and sense of mission with the followers. Radical, innovative solutions to critical problems are proposed for handling followers' problems. The leader has the followers' respect, faith, and trust. The followers want to identify with the leader. The leader shows determination and conviction.
- Inspirational motivation: The leader increases the optimism and enthusiasm of followers. The leader communicates with fluency and confidence using simple language and appealing symbols and metaphors.
- Intellectual stimulation: The leader encourages new ways of looking at old methods and problems. The leader emphasizes the use of intelligence and creativity. The leader provokes rethinking and reexamination of assumptions on which possibilities, capabilities, and strategies are based.
- Individualized consideration: The leader gives personal attention to followers and makes each feel valued and important. The leader coaches and advises each follower's personal development. (25)

By definition, leaders must have followers who engage in the expressed vision and plan of the leader (Peters and Waterman, 1982; Kotter, 1990). The transformational leader attempts to "raise the level of consciousness of followers by appealing to higher ideals and values such as liberty, justice, equality, peace, and humanitarianism, not to baser emotions such as fear, greed, jealousy, or hatred. Followers are elevated from their 'everyday selves' to their 'better selves'" (Yukl, 1989; 271). Under these circumstances, could followers begin to model this behavior and become

second-generation leaders? The notion that we are leaders in one part of our lives and followers in another is commonplace. Acknowledging that people take on the role of leader and follower through the course of daily activities both in the workplace and out, one may expect that followers of a transformational leader would take on this mantra when assuming the leadership role.

This cascading effect (Waldman, 1999) of leadership is readily apparent in the Phoenix Fire Department. There is a Phoenix way of doing business, and most of the United States fire service knows about it. Alan Brunicini has been the Fire Chief of Phoenix for over 30 years. Through his charismatic leadership and his passion and compassion for his department's members, Chief Brunacini has established, with a group of dedicated individuals, an organizational culture specific to Phoenix FD. Put simply, if you are a firefighter or a chief officer in Phoenix FD, your behavioral expectation is to "Be nice." Be nice to each other and to the public. From the Chief, cascading down through the ranks, a corporate culture of vision, innovation, openness, and learning exists.

Chief Brunacini is also an example of a leader who has used his leadership approach to transform individuals under his command, and stimulate system changes, both within the Phoenix FD and the fire service, nationally. He uses transformational leadership at both the micro and macro levels.

At the micro-level, the leader is concerned with influence between individuals, and at the macro-level there are leadership activities targeted on changing social systems and reforming organizations (Burns, 1978). This frame of leadership allows one to consider the leaders' influence up and down within the organization, as well as outward into the surrounding environment (Moore, 1995).

One must consider the many factors affecting a leader's ability to achieve results. Waldman states, "Individuals make the erroneous attribution that organizational performance is determined primarily by leaders when, in fact, other variables such as environmental forces or luck account for the supposedly apparent effect of leaders" (1999; 1). According to Bolman and Deal, "Leaders make things happen, but things also make leaders happen. Context influences both what leaders must do and what they can do. No single formula is possible or advisable for the great range of situations that potential leaders encounter" (1997; 296).

Senior managers of complex public organizations are affected by their own internal drives; by the complex behavior of human beings acting as a body of interrelated members; the history, culture, and climate of the organization; external forces outside the organization; and by the constraints and expectations of institutions (Nalbandian, 1999).

For a leader to influence an organization and its members to the degree transformational theorists suggest requires a few other considerations. First, an assumption embedded in transformational

leadership is the need or readiness to transform (Ackoff, 1999). Organizations ready for change and innovation are generally facing a crisis of some sort (Gruenebaum, 1998), either due to competition, destructive leadership, poor performance and external criticism, or revenue shortfalls. Organizations that are performing well, and have adequate resources are not motivated to move dramatically from the status quo. Second, an intermediary step to develop trust, establish or restate organizational values, lay the foundation for communication and establish a system of rewards by using constructive leader/follower transactions is beneficial before followers are ready to buy-in to the new promise. Figure 3 illustrates the evolution of leadership along this continuum.

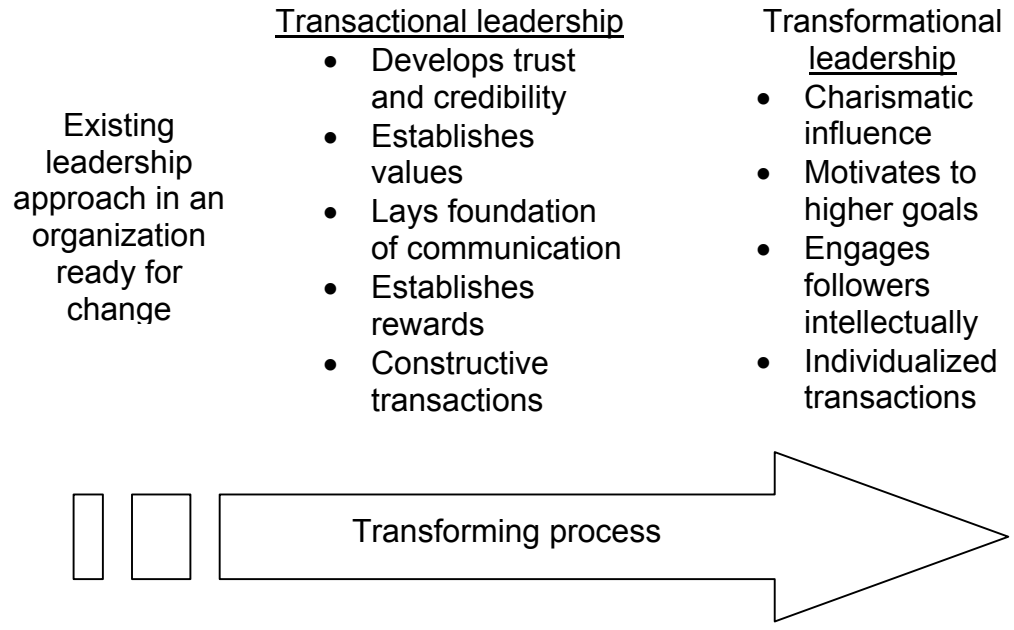


Fig. 3. Evolution Towards Transformation

Critics of transformational leadership theory cite the focus of this approach on the leader as the central figure in the organization and liken it to charismatic leadership. However, Yukl (1998) and Bass (1996) point out that while transformational leaders use charisma to motivate and influence followers, they will also empower and act as mentors, coaches, and teachers. Some malevolent charismatic leaders may motivate followers as well, however only to imitate or identify with the leader, not to move beyond their self-interest for higher goals. Criticism of transformational leadership has some merit; for how can the average, well-meaning, student of leadership achieve transformational status? The list: idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation seems to be a high order for many department heads, division managers, or fire chiefs.

Research in the area of transformational and transactional leadership, generally using the Multi-factor Leadership Questionnaire (MLQ), shows transformational leadership has a “stronger and more consistent” association with leadership effectiveness (Yukl, 1998; 328).

Another criticism of transformational leadership centers on its potential for pathological uses in organizations. Charismatic leaders can have great influence and control over followers. Unfortunately, history is replete with cases of such leaders who have used this influence for destructive purposes, including Adolph Hitler, Jim Jones, and David Koresh. Just as any leader can

use her/his power and influence in a negative manner, the transformational leader is equally susceptible to negative purposes.

This portrait of transformational leadership requires a high degree of responsibility on the part of the leader. In the private sector, executives who lead their organizations in this manner must do so with integrity, responsibility and accountability.

The literature often frames the discussion of transformational leadership in the context of organizations. Yet, this study focuses on fire chiefs who are both organizational and public leaders. The idea that there is voluntary participation on the part of the followers in organizational settings, i.e. the follower can transfer to another assignment or seek employment elsewhere, and therefore has within his/her grasp the freedom to exit the leader/follower relationship when so desired can not simply be extended to the public leader/(citizen) follower relationship. The realm of the public leader is not the same as their counterpart in private organizations. Public leaders' influence often moves beyond the bounds of the organization to a citizenry that often does not have freedom to exit. Therefore, the responsibility assumed by every public leader is to lead with the public good in the forefront (Koehler and Pankowski, 1997). The next section will extend the concepts of leadership into the public arena.

Public Leadership

One of John J. Kirlin's seven big questions (1996) asks, "What balance shall be struck among neutral competence, sensitiveness, and

leadership?" This question provokes one to examine leadership in the public administration setting as a unique practice, differentiated from leadership in the private sector by its need for of representativeness, responsibility, and accountability to the citizenry (Frederickson, 1997; Gawthrop, 1998). In the private sector, there is an increasing recognition of the need to respond to public concerns although a "corporate" public conscience remains second to profits.

Kirlin's "neutral competence" could be categorized as a management not a leadership characteristic. However, where does the issue of balance leave us? There are those who state that leaders should be strong advocates not only for their organizations but also for larger public causes (Behn, 1998; Gawthrop, 1998). Public managers are viewed as key in solving some of the failures of government (Behn, 1998; Osborne and Gaebler, 1992; Osborne and Plastrik, 1997). An activist public manager concerned with solving these government failures may employ leadership strategies of a political nature. Luke (1998) views public leadership as sets of behaviors that bring diverse groups together from different organizations or settings in an effort to solve common problems by facilitating stakeholder collaboration.

In the context of public organizations, political leadership is about clarifying the leader's goals, assessing the distribution of power and interests, and building coalitions and linkages to key stakeholders by establishing networks (Bolman and Deal, 1997; Cook, 1998).

Issue networks (Frederickson, 1997) occur when leaders recognize the need to band together with other organizations to take advantage of scarce resources or increase political will. In economic terms, these networks can reduce transaction costs between collaborating groups. Work often takes the fire chief outside his/her department into shared power environments such as regional boards or joint powers authority settings. These boards are often made up of representatives of public organizations with some common goals, however interests will also frequently include nongovernmental entities and representatives of civic groups in the community. Executive fire officers working in these settings may need to apply an extended set of leadership skills that might not be practiced within the leader's organization (Nalbandian, 1999). Because of the diverse backgrounds and underlying assumptions of the groups working on boards, coalition building, interpersonal relationship skills, and education gain importance as leadership competencies. Issue networks effectively extend a fire chief's sphere of influence outside the agency and the field.

Fire chiefs extend their political sphere of influence by managing upward toward political power, outward toward constituencies and other interests outside the organization, and downward into the organization by improving the organization's capabilities for achieving desired results (Moore, 1995). To use Moores' model, a fire chief's leadership activity, under the political governance category, would include entrepreneurial advocacy,

management of policy development, negotiation, public deliberation, and public sector marketing (1995).

These activities do not come without serious cause for hesitation. The current debate over the New Public Management addresses some of these concerns (Frant, 1999; Terry, 1999). Issues arising over entrepreneur, advocate, and deregulated leaders center around the need for ensuring the public interest while integrating these new roles. Putting the public good ahead of individual or organizational betterment is a concern for many people afraid of the negative consequences of raising the values of efficiency and economy above other values that have traditionally embodied the practice and spirit of Public Administration (Frederickson, 1997; Terry, 1999).

The underlying ideas of the New Public Management arise out of government reform movements and include transaction-cost economics, public choice theory, and agency theory (Kettl, 1997). The debate between Frant and Terry strikes at the heart of Kirlin's concern for "balance". To what degree can a public manager be an advocate or an entrepreneur before threatening the democratic values of the country with self-interested behavior exercised in the name of the organization? Authors on both sides of the debate recognize the need for public accountability, but they disagree on how to achieve it. Yet, there is no disagreement that public leaders are at a minimum the custodians of the agency during their tenure. As such, one responsibilities is to ready the agency for the future (Silverthorne and Wang, 2001).

If one were preparing his/her family for the future, there would be certain traits or characteristics that would be considered as absolutely imperative to develop. The same notion holds true for public leaders and their organizations. Luthy offers the following eight legacies for public leaders to consider in readying an organization for the future: 1. Create a collaborative culture, 2. Establish a culture of planners, 3. Build learning organizations, 4. Develop employees to their full potential, 5. Build confident, spirited organizations, 6. Inspire pride and community connectivity, 7. Reconnect with the community, 8. Arouse a progressive community spirit (2000, 21-22).

Bolman and Deal (1997) bring together the different approaches to leadership offered in this chapter by the use of their frames approach. Their hypothesis suggests that the decision to use a specific leadership approach should be based upon both the leader and the circumstance. These authors offer the following prescriptions for leader behaviors, set within each of the four frames.

- Structural Leadership
  - Structural leaders do their homework.
  - Structural leaders rethink the relationship of structure, strategy, and environment.
  - Structural leaders focus on implementation.
  - Effective structural leaders experiment, evaluate, and adapt.
- Human Resource Leadership
  - Human resource leaders believe in people and communicate their belief.
  - Human resource leaders are visible and accessible.
  - Effective human resource leaders empower others.

- Political Leadership
  - Political leaders clarify what they want and what they can get.
  - Political leaders assess the distribution of power and interests.
  - Political leaders build linkages to key stakeholders.
  - Political leaders persuade first, negotiate second, and use coercion only if necessary.
- Symbolic Leadership
  - Symbolic leaders use symbols to capture attention.
  - Symbolic leaders frame experience.
  - Symbolic leaders discover and communicate a vision.
  - Symbolic leaders tell stories (1997; 306-316).

Using the four frames to scrutinize leadership and organizations offers an instructive method to illuminate the inherent and possible characteristics, activities, motives, and relationships of each. Yet, an enhanced model may provide a richer examination. Bolman and Deal integrate considerations for structuring an organization for performance, performance goals, performance controls, and performance assessment into each of the four frames as a sub-element. However, this study offers a fifth and distinctive frame, the Performance Frame, which can be used in the same manner as suggested by Bolman and Deal to reframe organizations and prescribe a leadership focus.

Adding Performance Leadership as a fifth frame allows one to emphasize this crucial element of organizational purpose.

- Performance Leadership
  - Performance leaders enable followers to link organizational inputs to outcomes.

- Performance leaders establish means to evaluate organizational productivity.
- Performance leaders effectively connect human resources with production resources.
- Performance leaders create relational pathways to allow continual improvements in production.

1. Performance leaders enable followers to link organizational inputs to outcomes. By making the relationship between organizational inputs and outcomes clear to followers and themselves, performance leaders improve the effectiveness and efficiency of organizational work flow. Firefighters can lose sight of the necessary support work required to maintain a fire department operation.

Although the lead operational units in a fire department, fire crews must be supported by the input of resources in payroll, logistics, fleet maintenance, administration, mapping, and many other divisions to be able to focus on their emergency response role. These other inputs are critical in ensuring the readiness of a fire company, yet support units are often not recognized for their contribution when the public's focus is drawn to the emergency responders.

Performance leaders are able to help bridge the gap between field operations and support units by providing data illustrating the costs of operational missions to those providing the service. Without such information, field providers may not recognize the organizational costs of

producing a service. For example, given the knowledge that prehospital medications and medical supplies are quite expensive and most often have expiration dates, field providers can better rotate stock, develop more efficient inventory methods, and ensure items eligible for cost recovery are accounted for on Patient Care Reports.

2. Performance leaders establish means to evaluate organizational productivity. Assessing the productivity of an agency is more than just counting units of work product; it is first, clarifying agency goals and objectives, and then, identifying significant input resources, production activities, outputs, intermediate outcomes, and outcomes. By identifying the individual elements of production, from input through outcome, the performance leader examines the process as an interconnected system and evaluates each component for production effectiveness and efficiency. For example, if fire administrators examine the flow of a 9-1-1 medical aid call from identification of need through delivery of the patient at the emergency department, then critical production steps along the way can be examined for improvement.

3. Performance leaders effectively connect human resources with production resources. Many fire departments use committees of firefighters to help design and improve the very tools they use. Using end users to provide design input on production resources such as computer software, fire station designs, fire apparatus features, and the safety gear worn by firefighters is an essential factor in connecting human resources to

production resources. The better the relationship between human beings and the tools they employ in the delivery of their services, the better the operation.

The unique and demanding characteristics of emergency work have called on those in the field to continually develop safer and more effective means of performing the work. Performance leaders establish and encourage followers to participate in groups tasked with improving production tools and resource utilization.

4. *Performance leaders create relational pathways to allow continual improvements in production.* Relational pathways are communication and cooperation networks between organizational units and individuals. These horizontal and vertical pathways allow creativity and innovation to flow between production points and help break down traditional barriers to communication between organizational levels. Performance leaders establish relational pathways by emphasizing and supporting cross-divisional collaboration.

Contrary to the stovepipe mentality seen in some organizations, where organizational units tend to operate without a sharing of ideas, solutions, resources or common objectives, relational pathways provide a means for managers and workers to build seamlessly upon each other's strengths by sharing information, pooling resources and developing strategies that complement rather than compete. Performance leaders establish relational pathways for themselves as well, and encourage cooperative relationships

among their followers to build a collaborative and learning organization. Where organizational units cooperate and collaborate, improvements in production will be seen, as well.

Fire Service Leadership

The formal structure of fire departments in the United States has not changed significantly since Benjamin Franklin became the first fire chief of Philadelphia and was later coined the father of the US Fire Service. In the late 1700's, fire companies were formed of smaller groups of firefighters under the command of a single leader who was part of an ascending hierarchical command structure. The fire companies were geographically based to achieve a quick response to nearby buildings, yet due to the need for a large numbers of firefighters to fight structural fires, the companies assembled together to do battle, much like the companies and battalions of an army fighting an aggressor.

This model remains virtually intact for modern fire departments today. Figure four illustrates the common structure of contemporary fire departments in the United States.

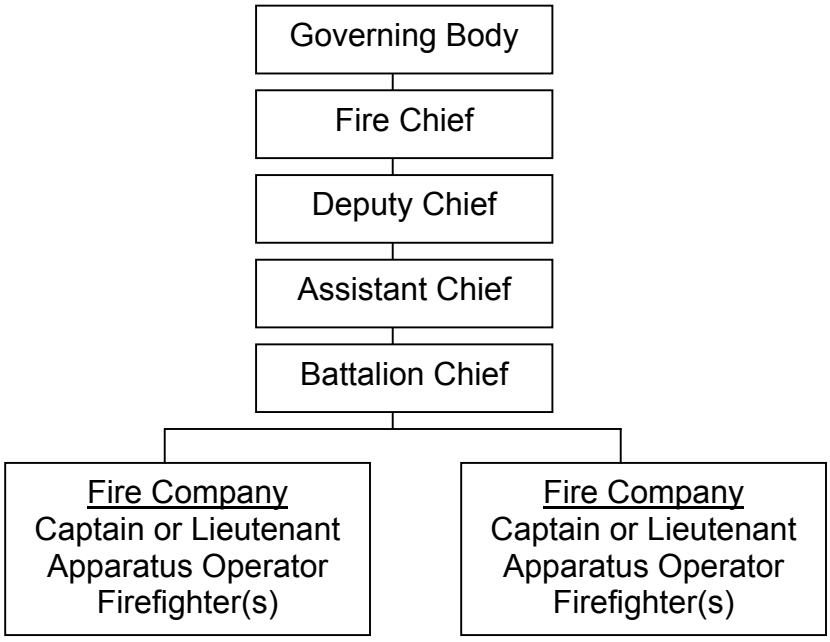


Fig. 4. Typical Fire Department Structure

Although fire captains or lieutenants can have responsibility over other functional components of the department, they most typically are charged with the responsibility of a single fire company (engines, trucks, ambulances, and rescues). Fire captains or lieutenants are first-line supervisors. Battalion chiefs generally have command over a number of fire companies located in separate fire stations situated throughout the community. Battalion chiefs are usually considered mid-level managers and are nonexempt positions in many organizations. Responsibility for the various divisions of the department, (operations, fire prevention, training, emergency medical services) falls to the assistant or division chiefs, who are frequently considered exempt, management employees. Next in the hierarchy are deputy chiefs, who are usually part of the senior management team; they are

also exempt employees. Deputy chiefs have authority over large or specialized divisions, or major groups of divisions in the department. The fire chief, as CEO of the department is responsible for the administrative duties, operational effectiveness and efficiency, and safety of the public and firefighters as specified by applicable laws, local ordinances, and industry standards. Although the governance structures of fire departments vary by jurisdiction, all have some form of governing board, elected or appointed, to which the fire chief answers either directly or through appointees.

The above description of how fire departments are organized may lead one to believe that the field has been left in the dust of contemporary management and leadership thought and practice. That is not the case. The Weberian structure (1922), modeled after Prussian armies, has proven to be the best organizational structure for the mission. This structure has proven to be a sound approach to fielding a force of responders within minutes of an emergency and developing a coordinated response to thwart the effects of urban or wildland fires, natural disasters, large and small medical incidents, aircraft crashes, hazardous materials spills, and complex rescue missions.

Following the fire season of 1970, CDF, the California Department of Forestry (as it was known then), the US Forest service, and five local fire departments in Southern California recognized the need to refine and formalize procedures for multi-jurisdictional response to large wildland fires. These agencies formed a unique partnership that has become the model for governmental cooperation throughout the United States. This group

subsequently developed and adopted management, organization, coordination, and leadership structures and procedures to guide such responses. F.I.R.E.S.C.O.P.E. (Firefighting Resources of Southern California Organized for Potential Emergencies) became the acronym for the group, and there is still an active committee charged with continuing the systematic evolution of emergency response procedures in California. This approach to emergency management places leaders in positions of authority based on functional capability, certifications, and qualifications rather than position or rank in one's home department.

That is not to say, however, that the fire service manages and leads all of its functions in such a manner. Fire service leaders are the ultimate situational leaders; they rapidly switch between leadership approaches depending upon their need to employ command and control at emergency scenes or use one of many other leadership approaches at headquarters. On emergency scenes these women and men are required to process changing or incomplete information, select options for action, evaluate existing resources, estimate risk, and implement plans within seconds or minutes of arrival at the scene. Many fire chiefs become very competent at using a diverse set of leadership skills by the very nature of the job demands; some become exemplary leaders.

Two fire service writers stand out as significant contributors in bringing to the forefront modern fire service challenges and leadership approaches. They are Alan Brunacini and Ronald J. Coleman. Chief Brunacini's influence

on fire service leadership and advances has been documented earlier in this study. However, the following list illustrates his common sense approach and brevity. On the subject of fire chief leadership Brunacini recommends:

- Engage brain more.
- Talk less.
- Listen more.
- Build trust in yourself by trusting others.
- Open eyes and pay attention.
- Be in the right place more.
- Become more emotionally literate.
- Stop micro managing.
- Lighten up and let go.
- Laugh more.
- Don't hurt people's feelings (i.e., understand people's feelings) (2000: 64).

Chief Coleman, as a retired local government fire chief for over thirty years and past California State Fire Marshal under Governor Wilson's administration asks chief officers to continually reexamine their leadership approaches and be mindful of the office of the fire chief in one's behavior and thought. Much of Coleman's writing focuses on *doing the right thing* as a fire service leader. Coleman addresses the moral and ethical dilemmas fire chiefs face in a questioning, rather than prescriptive manner (1996a; 1996b; 1997a).

On the subject of leadership effectiveness, Coleman argues that leaders are often more effective by using "less autocratic methods that rely more on awareness, commonality, and relationship. Using these methods,

they find techniques to ensure that they'll remain an individual whom their followers regard as a leader" (1997b; 33).

Coleman's work in the area of measuring effectiveness and a fire department's readiness has greatly enhanced the methodology by which fire departments can determine their quality and state of preparedness. He was instrumental in developing the Commission on Fire Accreditation International (CFAI), which is discussed later.

Performance measurement in the fire service is not a new concept. Examining response time criteria, company performance evolutions, individual firefighter skills performance, and the performance functionality of fire apparatus has been an accepted practice for many years. However, performance measurement, as it relates to overall department preparedness, effectiveness, and efficiency or as it is applied to programmatic evaluation is not so commonplace. The next section reviews the literature on performance measurement and two related topics.

Performance Measurement

Performance measurement, benchmarking, and program evaluation are necessary ways to see how our public service organizations are doing. Performance measurement is valuable to an organization's leadership, governing boards, and the public as a tool for continuous improvement. An equally important question is, "how is Fire Service leadership associated with organizational performance?" Kolb (1995) argues that there is a relationship between leadership effectiveness and hard data, such as organizational

productivity. The fundamental question to be answered is, “Is the agency fulfilling its purpose?” If we do not adequately assess this very basic question, public resources may be wasted, needs left unmet, and organizations may suffer internal pathologies from declining morale due to poorly aligned input resources, output activities, and ultimate outcomes (Fischer, 1994; Hatry, Gerhart and Marshall, 1994; Collins, 1996; Wray and Hauer, 1996; Kopczynski and Lombardo, 1999; Wholey, 1999).

Comparative performance measurement at the local level is receiving increasing attention as the ICMA continues its 1994 study of police, fire, neighborhood, and support services (Coe, 1999). The FY2000 report still includes fire and police services, but it eliminates neighborhood and support services. Instead, the FY2000 volume includes the additional categories of:

- code enforcement
- facility management
- fleet management
- highways and road maintenance
- housing
- human resources
- information technology
- library services
- parks and recreation
- purchasing

- refuse and recycling services
- and risk management (ICMA, 2001).

The ICMA Comparative Performance Measurement Consortium originally consisted of 44 city and county managers coming together to "examine, analyze, and interpret performance information provided by member jurisdictions so that participants can share management practices that have led to positive outcomes in individual jurisdictions and departments" (Kopczynski and Lombardo, 1999; 126). The FY 2000 report contains submissions from 113 participants. The ICMA effort identified three major categories of quantitative outcome measures for the fire service:

- *Community Risk Reduction* including number of fires; injuries and deaths occurring in structures; arson clearances; structures inspected; and civilian fire-related injuries and deaths.
- *Fire Suppression* including structure fire outcomes, such as "confined to room of origin," and fire firefighter injuries.
- *Emergency Medical Services* outcomes, such as basic life support (BLS) and advanced life support (ALS) response times (ICMA, 1999).

The yearly ICMA Comparative Performance report is a useful tool for public managers, as well as for the citizens they serve because it allows one to compare services across jurisdictions by using an objective assessment of the efficiency and effectiveness of local fire department service delivery (ICMA, 1999).

In 1988, the ICMA and the International Association of Fire Chiefs (IAFC) committed both organizations to develop a voluntary national accreditation system. The Commission on Fire Accreditation International (CFAI) publishes a self-assessment manual crosscutting a fire department's organizational design, policy, procedures, and emergency services response capabilities. To date, this is the most detailed analysis of fire departments available; it encompasses 10 categories, 45 criteria and 245 performance indicators (Brooks, 1997; Bruegman and Coleman, 1997). There are fifty-nine fire departments in Canada and the United States, which have received accreditation and several others in their final applicant process (Commission on Fire Accreditation International, 1997; 2002). The performance criteria used in the CFAI guidelines provide a basis for comparison of the outcome measures in the ICMA report.

Benchmarking is another tool that goes hand in hand with performance measurement. Using this tool allows organizations to borrow a surveying technique to mark a known level of performance and use that point as a reference for other points and measurements. Bruder and Gray (1994) and others (Ammons, 1999; Coe, 1999) report that public organizations use benchmarking to identify performance gaps between current performance and national professional standards or recognized performance criteria. The following seven steps are offered by Bruder and Gray as a process for public-sector benchmarking.

1. Determine which functional areas within you organization will benefit most from benchmarking.
2. Identify the key performance variables to measure cost, quality, and efficiency for the functions you have selected.
3. Pick the best-in-class organizations for each benchmarked item.
4. Measure the performance of the best-in-class companies for each benchmarked function.
5. Measure your own performance for each benchmarked item, and identify the gaps between you and the best-in-class.
6. Specify actions and programs to close the gaps in your favor.
7. Implement and monitor your benchmarking results (1994).

There are a number of factors to be considered when using benchmarking as an evaluation tool. The most significant is to measure like items under like circumstances. External influences can vary dramatically from location to location and make reasonable comparison difficult, at best, erroneous and misleading at worst.

The literature on leadership effectiveness as expressed through organizational performance is limited, empirical research is even scarcer. There is good reason for this scarcity of literature. There are so many factors contributing to the success or failure of organizations; how can a single leader make a difference. Yet, the assumption that leaders can and do guide organizations is prevalent. How many boards of directors or city councils would hire a fire chief if they did not desire that person to lead the organizations to higher performance, greater efficiencies, or improved effectiveness?

Summary

This chapter has reviewed the relevant literature on leadership; this review will be used to provide a theoretical setting for subsequent chapters.

This research is nested in the perspective that a human relations and behavioral approach to leading organizations and people has considerable effectiveness in accomplishing the mission and goals of organizations. Some time was spent differentiating between management and leadership activities; this differentiation does not diminish the importance of either as a necessary talent for chief officers and their senior staff to master. As stated earlier, the daily activities and behaviors of today's fire chiefs incorporate both areas, leadership and management, in a muddy stream of complex interchanges.

The three leadership theories examined (leader/member exchange, transactional, and transformational) are visible in the practice of fire leadership and seem to both describe and explain observed behaviors. When held up to personal experience and compared to the chief officers selected for this study, each theory offers assistance in understanding how these leaders perform their roles as public leaders. Yet, can these theories help explain leadership effectiveness? Later chapters will present this dissertation's findings.

This Dissertation has as its central figures and units of analysis fire chiefs. Chiefs are public leaders who execute their duties on behalf of the citizenry through the hard work of their departments' membership. As we speak of leadership in this setting, one must be ever mindful of the values and responsibilities of public leaders which go beyond those expected in the private sector.

The fire service has similarities to military and law enforcement models of organizational structure and leadership demands. There are differences though, which distinguish fire chiefs from Army colonels or police chiefs. As demonstrated earlier, fire chiefs rise through organizations that have as their foundational units, teams (the fire company). On routine structure fire assignments, four to eight fire companies assemble to control the scene. Through organized approaches using coordinated command and control, field operations and field operation readiness activities continually develop and reinforce the need for collaborative relationships. Fire chiefs, as part and parcel of that culture and structure, seem to bring the values and leadership approaches associated with highly developed leader/member relationships to their roles as fire chief.

The basic law enforcement field unit is *the* officer, or pair of officers assigned to patrol together. Except in the cases of a few police subunits, i.e. specialized tactical units, the opportunity to collaborate in solving problems as a larger team does not exist. Even field supervisors are generally in patrol cars, separated from their direct reports.

The military model of leadership is closer to the way fire department leadership is operationalized. However, armies are either at war, preparing for war, or in a waiting state. These activities can be measured in days, weeks, months, or years. Therefore, leaders may comfortably move from one leadership approach to another, as in the fire service, but the transition may be much slower. Fire service leaders, even at the chief officer level, may be

using vastly different leadership approaches several times in a day, based on the situations at hand.

The final section of this chapter presented an overview of contemporary thought on performance measurement. For this Dissertation, performance measurement is used to compare participating fire chiefs' aggregate leadership effectiveness ratings to selected measures of organizational performance. As public leaders increasingly look both within their departments and externally to similar departments for measures of success, performance measurement and benchmarking techniques will become important tools.

CHAPTER III

METHODOLOGY

Description of Research Methodology

This chapter details the methodological approach employed in this Dissertation. This chapter's purpose is to clearly identify the research procedures involved, identify the instruments used in the study, and detail ways the data are analyzed. By these means, findings are placed in the context of their origin and a watermark for future research in this area can be gained. This chapter is organized in a chronological order; moving from design and selection of participants through analysis of the findings.

This researcher is immersed in the context of this work and throughout the study adds his opinion, based on eighteen years experience as a student and practitioner in the field of fire service and public administration. C. Wright Mills (1959) gives credence to the interplay of work and life in the social sciences studies when he says:

> …you must learn to use your life experiences in your intellectual work: continually to examine and interpret it. In this sense craftsmanship is the center of yourself and you are personally involved in every intellectual product upon which you may work. To say that you 'have experience' means, for one thing, that your past plays into and affects your present, and that it defines your capacity for future experience (196).

The methodological approach to this Dissertation uses both descriptive and correlational research. Participant Leadership Effectiveness Assessment (Gilbert, 2000) surveys are used to determine perceived

leadership effectiveness scores and examine relationships with several variables. Relationships between leader effectiveness factors, as well as LEA aggregate scores and selected areas of organizational performance are also studied. The field research for this Dissertation occurred between September 2000 and August 2001.

Research Design

This Dissertation is primarily a qualitative study of fire chief leadership effectiveness that uses correlational components to test many of its hypotheses. Descriptive research guides the findings in Chapter IV. This research sought to elicit descriptions from the participants on contemporary and common success areas and common challenges facing fire chiefs of departments in California. Additionally, the researcher posed a question to respondents during the interviews to elicit advice on leadership for fire chiefs coming into their departments. In the course of the interviews and subsequent discussions, nearly 100 senior fire department officials responded this question.

Chapter IV also reports on the findings of the study which are based on statistical relationships between leadership effectiveness measures, leader characteristics, and selected organizational performance measurements. For the purposes of this study, the variables included are outlined in Table 1.

Table 1.
Research Variables

Hypothesis	Independent Variables	Dependent Variables
P_1 Ratings of employees' productivity are related to employees' perceptions of their fire chief's leadership effectiveness.	Leader effectiveness measures: TBB, MOB, REL, CHAR, FOR, IND, AUT, PAR, and STR.	Employee productivity
H_1 Fire chief tenure is related to employees' perceptions of their fire chief's leadership effectiveness.	Fire chief tenure	Leader effectiveness measures: EMPB, CAL, and FRI.
H_2 The fire chief's level of education is related to employees' perceptions of their fire chief's leadership effectiveness.	Fire chief's level of education	Leader effectiveness measure: REL, CHAR, STR, PAR. And FRI.
H_3 There is a relationship between a fire chief's leadership effectiveness measures and the organization's input resource of budget dollars spent per capita.	Leader effectiveness measures: REL, JOY, OUT, DEP, and FRI.	Organizational input resource: budget dollars spent per capita.
H_4 There is a relationship between a fire chief's leadership effectiveness measures and the organization's intermediate outcome performance measurement of residential structure fires per 1,000 population served.	Leader effectiveness measures:MOB, DEP, FOL, FRI, IND, .	Organizational intermediate outcome performance measure: residential structure fires per 1,000 population served.

Selection of Participants

Fire departments were selected based upon their participation in the ICMA Comparative Studies from FY1995 through FY1999. Since the time the field research was completed, ICMA published the FY 2000 (2001) report. This report was used to provide the most recent data available on organizational performance for departments that were still active participants in the ICMA work. Following an early discussion in 1997 with Ronny Coleman (at the time he was the California State Fire Marshall), this researcher decided to limit the participants to only those fire departments in California. Chief Coleman believed that California was unique in its approach to emergency scene management due to its well-developed Incident Command System. Based on his extensive contact with fire chiefs up and down the State, he felt that California fire chiefs would be more interested in a study that was specific to this state's fire leaders.

At the time the field research was initiated there were eighteen California fire departments participating in the FY 1999 ICMA study. There were an additional five California cities participating in the overall study; however the fire departments in those cities were not contributing data to ICMA. The participation of various departments or divisions in a municipality in the ICMA study is up to the local governing body or administrator. There was no significant difference between those fire departments participating

and those not submitting data. To increase the population of California fire departments FY 1998 and FY 1997 data were included.

Introductory letters requesting the organization's participation in this Dissertation (Appendix A) were sent to all fire chiefs representing California fire departments which had participated in FY 1997, FY 1998, and FY 1999 ICMA studies; this group constitutes the study's population. Twenty-five such letters were sent. Follow-up calls were placed to all of the fire chiefs approximately two weeks to one month following the letters. Nineteen responded positively, and either a site visitation date was set or survey packets and introductory videos were sent to the fire chief. Three fire chiefs chose not to participate for various reasons and three others did not respond. This represents a 76% response rate (19/25=.76). All nineteen fire chiefs who agreed to participate returned the Leadership Effectiveness Assessments (LEA). Table 2, in Chapter IV identifies the fire departments that were contacted to participate in this study, the number of years of their participation in the ICMA studies, and the number of respondents from each participating department.

Of the three fire chiefs who chose not to participate, each cited a major upset within the department or the city. One of the departments had recently experienced a line of duty death among its membership. Recognizing that many firefighters perceive their department and its membership as a second family, the loss of a fellow firefighter is a consuming experience. The other two chiefs stated that they would not

participate because a new administration had recently taken office and they did not want to place any additional workload upon their staff. There was no discernible difference between the three departments that did not respond and those participating in the study.

Fire chiefs were provided the option to participate in the LEA by having the researcher conduct a site visit or by responding to materials sent through the US Mail. Site visits were encouraged in all cases. If a site visit was accepted, a visitation date was scheduled at the convenience of the fire chief on a day when he/she was holding a regular senior staff meeting. The fire chief was asked to have all direct reports present at the meeting. In some of the smaller organizations, senior staff included those one degree of supervision removed from the fire chief; however, due to the size of these departments these individuals had close working contact with the fire chief. In many cases, civilians and the chief's secretary participated in the survey.

In the cases where the fire chief chose to have the LEA's mailed to them, the researcher included an orientation letter (Appendix B), as well as a video tape that was asked to be played to the senior staff at their meeting, prior to the administration of the surveys. A copy of this tape can be made available upon request.

The University of Southern California Human Subjects Research Procedures identify these subjects as an exempted class according to Appendix B- Paragraph B-4; "Research involving survey or interview procedures, when respondents are elected or appointed public officials, or

candidates for public office." However, the interviewee's names and agencies are kept confidential. The interviewees were fully informed by the researcher as to the intent, scope, and use of the research, as well as to the issue of confidentiality prior to the interview.

Instrumentation and Field Procedures

The survey used to determine fire chief and follower perceptions of leadership effectiveness is the "Leadership Effectiveness Assessment (LEA) instrument developed by Gilbert (1990, 2000). The LEA has been used in a number of settings, including academia, business, and government (Gilbert, Hannan, and Flaggert, 2000). Both the leader (fire chief) and the direct reports complete an LEA, which includes eighty-eight statements reflecting the fire chief's leadership behavior. The survey participant responds to the LEA statements by indicating "Strongly disagree, disagree, neither agree or disagree, agree, strongly agree, or not observed" on a six-point Likert scale. When Gilbert developed the LEA he established "three higher-order factors (each consisting of four subfactors) … derived using principal-components analysis with a varimax rotation. These factors are Mission-Oriented Behavior (MOB), Empowerment Behavior (EMPB), and Relationship Behavior (RELB). Two other factors were derived nonempirically: Team-Building Behavior (TBB) and Personal Character (CHAR)" (Gilbert, Hannan, and Flaggert, 2000; 1555).

The subfactors of the five leadership effectiveness categories include:

- Mission-Oriented Behavior.

    - Forcefulness of presence, dependability, industrious, and authoritative.
- Empowerment Behavior.
    - Calming influence, delegator, organizational followership, and straightforwardness.
- Relationship Behavior.
    - Partner, friend, enjoyableness, organizational outreach.
- Team-Building Behavior.
    - “Five statements related to teamwork and building on all the talents of all on the work team” (Gilbert, Hannan, and Flaggert, 2000; 1555).
- Personal Character.
    - “Behavior based on integrity, morality, and ethical conduct” (Gilbert, Hannan, and Flaggert, 2000; 1555).

In addition to the statements on the LEA, the surveys contained biographical queries on the participants as well as questions to elicit information about the setting and environment of the department. One question asked if the department in question has had any major organizational activity or external influences in the past five years. This question was followed by a question asking about the type of organizational change. The following options were included; government reorganization, annexation, internal restructuring, major project, dramatic revenue increase, dramatic revenue decrease, other (please briefly describe.) The fire chiefs

were also asked the Insurance Services Organization (ISO) rating of their department and to select the form of government the department functions within, selecting from the following council/manager city, mayor/council city, township, county, or special district.

For those agencies where the researcher was invited to a site visit field interviews were conducted at the same time as the LEA administration. Upon arrival at each fire department site the researcher met with the fire chief to introduce himself and orient the chief as to the length, format, and content of the meeting. The meetings were held within a regularly scheduled senior staff meeting at the department. Therefore, the researcher was sometimes allowed to proceed at the onset of the meeting, following an introduction by the fire chief, or at a later point, when convenient for the chief and staff members. At each meeting, the researcher provided the following orientation and instructions to those present.

1. Some detail on the study and its significance as part of Doctoral work.
2. An overview of the purpose of the study, and its significant questions.
3. The purpose of this meeting.
4. A brief orientation to the interview segment.
5. A brief orientation to the LEA.
6. Meetings were scheduled for approximately for one hour. They ranged from fifty minutes to ninety minutes.

7. The researcher's guarantee of confidentiality pertaining to individual names, individual responses, and the association of the department with any specific findings.
8. A copy of the Dissertation was guaranteed to each participating department, and an offer was made to return to the department to present the findings should that be requested.
9. All present were provided the opportunity to participate or withdraw.
10. All participants, including the fire chief, were present and included in the interview meeting.
11. The researcher asked a series of three questions, with limited follow-up. The questions were open-ended and very informal. They are:

    Question 1. "What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?"

    Question 2. "What are the most challenging leadership or programmatic areas your Department faces?"

    Question 3. "If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?"

The interview was immediately followed by administration of the LEA. The participants completed the LEA individually in the same room as the interview. In two cases, the fire chief asked if the LEA could be completed by staff at a later date. These requests were accommodated, and the surveys

were returned by mail within a week. Prior to the administration of the LEA the researcher reviewed the instructions with the participants (Appendix D).

For those fire chiefs who had asked to self-administer the LEA without a site visit, the researcher prepared a four-minute video addressing the same elements as covered at the site visit LEA administrations. Additionally, a second, more detailed orientation letter accompanied the LEA copies, as well as a self-addressed, postage paid envelope for return of the surveys to the researcher. Because of the choice to self-administer the survey, these six departments were not included in the interview questioning.

Data Collection and Recording

During the site visit, the researcher used written notes and captured quotes of individuals from the interview responses. Note taking was the preferred method over tape recording to encourage a more open dialogue among the participants. Following the site visit, the researcher transcribed the handwritten notes using a word processor.

In most cases the LEA's were gathered from the participants at the conclusion of the site visit. In a few cases the chief chose to administer the survey at a later date. As mentioned previously, these surveys were returned to the researcher within a week. In cases where the fire chief chose to administer the surveys without a site visit, the LEA's were mailed back to the researcher following their administration by the fire chief. Once all surveys had been collected, they were prepared for processing and analysis.

Data Processing and Analysis

The notes from the field interviews were later assigned a number and copied. Then, all references to specific individuals, regions, cities, department names, and program identifiers that could be associated with a particular agency were scrubbed from the content. Next, this material was reviewed for key words and phrases in each question area to determine the frequency of occurrence and then they were ranked accordingly.

Once the LEA's were fully gathered from the participating departments, the researcher transferred all the biographical data into Excel (MICROS˜5.LNK). The LEA's were grouped by department and transferred to G. Ronald Gilbert, principal of Management Education and Development, Inc. (MEDi), for data input and initial statistical processing. Gilbert combined the LEA's into one database and analyzed them using SPSS/PC (Version 10.0.) by running one-way ANOVA tests on the five leadership effectiveness factors and the control variables. Gilbert then transferred the statistical results back to this researcher. The results of the ANOVA identified relationships between several of the variables related to the research questions.

Although the use of interval statistical analysis techniques on Likert scales derived data remains questionable by some, Borgatta and Bohrnstedt state ordinal measures such as Likert scales are almost always treated as continuous data, and interval level measures such as t or F tests are routinely used with them (1980).

This researcher then entered the individual leader LEA mean scores from all factors into a SPSS/PC (Version 11.0.1) database and calculated descriptive statistics by leader, as well as in each of the LEA factor groups. The leader characteristics and organizational input and outcome proxy variables were inserted into same database. The variables were then examined for relationships using Sommers'd, Kendall's tau-b, Gamma, and Spearman's rho techniques. Figure 5 identifies the methodological approach by illustrating the logic path between research question development, hypothesis development, qualitative investigation, quantitative analysis, interpretation of findings, and sense making or implications.

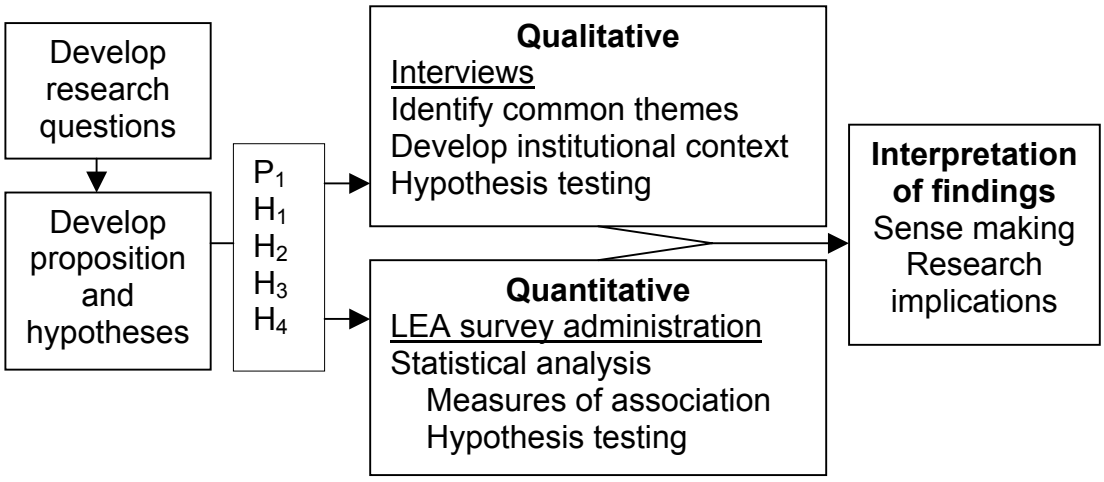


Fig. 5. Methodological Logic Path

Methodological Assumptions and Limitations

Descriptive analysis, the methodology employed by the researcher to conduct and make sense of the field interviews, assumes that what is communicated by the participant represents the true idea being conceived,

and is understood by the researcher in its original intent. We know that this process is not without peril because of the limitations of language and the difficulty of bringing one's experience on a particular topic to a point where it can be reduced to a few words before the researcher. Nevertheless, for this research, the use of open ended questions tapped the experience and thoughtful understanding of participants who shared their first hand knowledge of what is capturing the organizational energy of several California fire departments. The method also enabled the researcher to acquire the advice of nearly 100 fire service managers on critical aspects of executive leadership in today's department. Although, perhaps producing the some of the richest findings, the descriptive method is constrained by the skill of the researcher as an interviewer, and the limits of human understanding and one's *intellectual craftsmanship* (Mills, 1959). Because of the small size of the sample used in this study, the power of generalization is reduced. A final limitation of the descriptive method is interviewer bias, which increases or diminishes accuracy, depending on one's perspective. The second method used for this study, survey research, offers a more "scientific" approach, but has known limitations, as well.

Correlational research offers a statistical means to measure relationships between variables. The LEA has the strength of proven internal validity and reliability based on its administration in a number of organizational settings and provides the bases for statistical comparison. For this study ANOVA was used to initially identify significant variable

relationships. Somers' d, Kendall's tau-b, Gamma, and Spearman techniques were then used to determine strength, direction, and probability of relationships.

The survey population represents a reasonably homogenous group of fire chiefs and senior staff. The participating departments, although from cities that vary in size, have similar approaches to emergency planning and response, have similar building stock and infrastructure, are all under similar municipal governance structures, and were experiencing a general statewide economic upturn during the time of this study. As California fire departments, they experience the same state legislative mandates, have access to and/or participate in the same organizations representing fire service interests, and participate in the same statewide mutual aid response agreements.

Correlational research aids in the determination of relationships; however, it will not point to causation. Nor will it enable the researcher to determine if A precedes B or B precedes A, or if C has an effect on A or B. Spurious relationships between the variables considered in this study and other variables requires due caution, especially when this study examines relationships between the LEA scores and organizational input and outcome measures. Other environmental and/or organizational factors may have an effect on both leadership behaviors and how a department is performing. This study recognizes, but does not consider organizational culture, path dependence tendencies, organizational change factors, general economic conditions, or other similar factors in its analysis.

Proposition and Hypotheses

The following proposition and hypotheses guide the design, investigation, and discussion of this study. The place of a proposition in this study is to examine the researcher's conclusion that LMX theory, transactional theory, and transformational leadership theory can be supported by the findings that there is a relationship between effective leadership behaviors and follower productivity. The hypotheses included in this study delve into expected relationships between leader characteristics and leadership effectiveness in terms of follower attitudes and organizational productivity.

Hypotheses one and two relate to the research question "What are the relationships between fire chief characteristics and their perceived leadership effectiveness as viewed by followers?"

Rensis Likert (1961) recognized the importance of understanding the relationship between the quality of leadership and follower attitudes. Likert's work in this area strongly suggests that managerial qualities such as being unselfish, cooperative, sympathetic, democratic, interested in agent's success, honest, fair, and willing to help when asked will have positive results in subordinate attitudes toward work. Proposition one uses this theoretical base to examine subordinate perceptions of their own productivity. Likert's later work (1976) introduces the evolution of a new management pattern that describes a reciprocal system of influence between *associates* in an organization. As later chapters will show, this study places

importance on both leader and follower influence and the dynamic relationship between each.

P_1- Ratings of employees' productivity are related to employees' perceptions of their fire chief's leadership effectiveness.

Proposition one is assessed by using specific follower responses from the Gilbert instrument to target "productivity" ratings and compare them to measures of leadership effectiveness including: Mission-Oriented Behavior (MOB), Relationship Behavior (RELB), Team-Building (TBB), Character (CHAR), Forcefulness (FOR), Industrious (IND), Authoritative (AUT), Partner (PAR), and Straightforwardness (STR).

The leadership theories presented in this study, LMX Theory, Transactional/Transformational Leadership Theory, and Public Leadership emphasize relationship building, trust, and cooperation. As with any human relationship, some time must pass for the relationship between leader and follower to develop. Hypotheses one below examines the effects of time spent in the organization by using the LEA factors and the variable "chief's tenure."

H_1- Fire chief tenure is related to employees' perceptions of their fire chief's leadership effectiveness.

Hypotheses one is tested by using specific leader biographical data included in the Gilbert instrument asking for the number of years the leader has been the fire chief in this organization. Then, determining the relationship of that characteristic to measures of leadership effectiveness including:

Empowerment Behaviors (EMPB), Calming Influence (CAL), and Friend Behavior (FRI).

Education has become increasingly important as a measure of a candidate's preparation for administrative work and is evidenced by the number of public managers who hold college degrees. Fox and Schuhmann (1999) reported that of 524 city managers polled 72 percent had bachelors degrees or higher. Of these city managers 48.7 percent held masters or doctorates.

H_2- The fire chief's level of education is related to employees' perceptions of their fire chief's leadership effectiveness.

This hypothesis is tested by using the self-reported educational levels of the fire chiefs and comparing that data to the LEA factors, including Relationship Behaviors (RELB), Character (CHAR), Straightforwardness (STR), and Friend (FRI). Educational levels were reported on the LEA survey in the following categories: less than high school graduate, high school graduate, 1-3 years of college, college graduate, advanced degree.

Proposition one, as previously discussed, examines the followers' perception of their own productivity as it relates to the leader. Hypothesis one and two look at leadership effectiveness through the eyes of the subordinate. Hypothesis three and four move the discussion from the leader/follower context to one which examines leader effectiveness in securing organizational resources and performance.

Mindful of a continued emphasis in public management on performance measurement, (Osborne and Gaebler, 1992; National Performance Review, 1993; Kettl and Milward, 1996; Kettl, 1997; Osborne and Plastrick, 1997; Berry, Chackerian, and Wechsler,1999) this study uses two proxy measures of the fire chief's effectiveness outside leader/follower relationships. To answer the question, "What are the relationships between a fire administrator's leadership effectiveness and measures of organizational productivity?", hypotheses three and four examine the relationship between LEA factors (internal leadership measures) and proxies for organizational strength and performance. Likert (1961) and Kolb (1995) identify critical links between leadership and organizational productivity. One measure in the area of organizational strength is a healthy operational budget. Common to nearly all the field interviews was the reoccurring report of competition among city departments for limited resources. If possible, all of the fire chiefs interviewed would gladly increase the size of their budgets to provide better services, capital improvements, and compensation for their employees. Hypothesis three uses total operational budget dollars spent per capita in 2001 as a way to examine a leader's effectiveness in securing resources for his/her agency.

H_3- There is a relationship between a fire chief's leadership effectiveness measures and the organization's input resource of budget dollars spent per capita.

Hypothesis three is tested by using measures of leadership effectiveness from the Gilbert instrument, including: Relationship Behavior (RELB), Enjoyableness (JOY), Dependable (DEP), Friend, (FRI), and Organizational Outreach (OUT). Then, comparing those scores to budget dollars spent per capita in FY 2000/01. Fire department operational budgets were secured directly from participating agencies or from other public sources.

Hypothesis four looks at the relationship between Mission Oriented Behaviors (MOB), Industrious (IND), Dependability (DEP), Friend (FRI), and Followership (FOL) and a selected performance measure of fire department intermediate outcomes as reported in the ICMA Comparative Performance Measurement studies (1996, 1997, 1998, 1999, 2000, 2001). Reducing the incidence of fire in a community is a core mission of all the participating agencies. To determine if a relationship exists between fire chief leadership effectiveness scores and organizational performance, the number of residential structure fires incidents in a community in 2001 was selected as a proxy indicator.

H_4- There is a relationship between a fire chief's effectiveness measures and the organization's intermediate outcome performance measurement of residential structure fires per 1,000 population served.

Hypothesis four is tested by using measures of leadership effectiveness from the Gilbert instrument, including: Mission Oriented

Behavior (MOB), Friend (FRI), Industriousness (IND), Dependability (DEP), and Followership (FOL). Then, comparing those scores to the number of residential structure fires per 1,000 population served in each community for 2001. The numbers of incidents of residential structure fire were obtained directly from participating agencies or from other public sources. Residential structure fire incidents include single and multi-family occupancies, i.e. homes, duplexes, four-plexs, condominiums, and apartment buildings.

Summary

For purposes of explanation and future replication, this chapter has explicated the design and methodology of this study. The step-by-step process of fire department selection, contact, interview, and survey administration was identified to enable future research a perch from which to move forward or a basis to reconstruct. Finally, the methodological approach was examined to flush out possible pitfalls and highlight its strong points.

Each researcher achieves familiarity with a set of inquiry tools such as these and uses them for their merit in gaining a greater understanding of the focus of the study. The responsibility for the choice of instrument and the method of application lies wholly with this researcher. There may be better tools to draw out the lessons, and there are certainly more capable hands, but craftsmanship is built by trying.

CHAPTER IV

FINDINGS

Introduction

Field interviews with thirteen fire chiefs and the senior staffs of participating departments identified numerous common areas of organizational emphasis and challenge for California's fire service. The researcher is an eighteen-year member of California's fire service and is currently serving in a Metro size department as a member of the department's senior staff. The topics capturing the attention of the participating fire leaders, contemporary issues and challenges, ring true with this researcher's experience in the field.

The field interviews with senior staffs of participating departments also garnered experiential advice for fire chiefs assuming command in a fire department. In answering the question, "If you could whisper in the ear of the 'next' fire chief in this department any advice on leadership, what would you tell her/him?", the researcher listened to and recorded sage wisdom that should be heeded and continually reviewed in one's practice of running an organization. None of the advice is necessarily limited to the fire service. It is sound advice much of which is transferable to any organization, but it is especially helpful in public organizations.

This chapter first provides information in Table 2 on the participating fire departments, identifies their year's of inclusion in the ICMA Comparative

Performance Reports and the number of survey respondents from each agency. The respondent profiles are provided with broken down by ethnicity, education, age, gender, tenure, years worked for leader, promoted from within, primary work responsibility, and years in the fire service.

Question one is answered by reviewing and discussing the field interview findings. The interview findings are explicated through the use of the five frames; human resource, symbolic, structural, political, and performance. Research question two is addressed by the testing of P_1, $H_{1,}$ and $H_{2.}$ These findings are illustrated and discussed using the results of the measures of association between several variables. Lastly, the results of testing H_3 and H_4 are illustrated and discussed in answer to Question three, again using measures of association.

Table 2, below, identifies those fire departments, which have been participating in the ICMA studies and were contacted for this dissertation. It also shows which departments were visited by this researcher and how many individuals from each department completed a LEA survey.

Table 2.
California Fire Departments Participating in ICMA Studies (* fire chief/staff interviewed)

Fire Department	Years department participated in ICMA study						In study?	No. of participants
Fresno	95	-	-	98	-	-	no	-
Long Beach	**95**	**96**	**97**	**98**	**99**	**00**	**yes**	**4**
Los Angeles	95	-	-	-	-	00	na	-
Riverside*	**95**	**96**	**97**	**98**	**99**	**00**	**yes**	**8**
Sacramento*	**95**	**96**	**97**	**98**	**99**	**-**	**yes**	**8**
San Diego*	**95**	**96**	**97**	**98**	**-**	**-**	**yes**	**13**
Oakland	**-**	**96**	**97**	**-**	**-**	**00**	**yes**	**15**
San Jose	-	96	97	-	99	-	no	-
San Bernardino*	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**6**
Fullerton	-	-	97	98	99	00	no	-
Santa Rosa	**-**	**-**	**97**	**-**	**-**	**-**	**yes**	**4**
Santa Clara*	**-**	**-**	**97**	**-**	**-**	**-**	**yes**	**5**
San Mateo*	**-**	**-**	**97**	**98**	**99**	**-**	**yes**	**8**
Vacaville	-	-	97	-	-	-	na	-
Santa Monica*	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**7**
Redwood City*	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**9**
Carlsbad*	**-**	**-**	**97**	**98**	**99**	**-**	**yes**	**9**
Davis	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**5**
Merced	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**4**
La Mesa*	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**5**
Lodi*	**-**	**-**	**97**	**98**	**99**	**00**	**yes**	**7**
San Mateo Co.	-	-	97	98	99	00	no	-
Modesto*	**-**	**-**	**-**	**98**	**-**	**-**	**yes**	**8**
Chula Vista	**-**	**-**	**-**	**98**	**-**	**00**	**yes**	**6**
Daly City*	**-**	**-**	**-**	**98**	**99**	**-**	**yes**	**7**
Berkeley	-	-	-	-	99	00	no	-
Palm Springs	-	-	-	-	99	00	no	-
San Francisco	-	-	-	-	-	00	na	-
Santa Barbara	-	-	-	-	-	00	na	-
Santa Barbara Co.	-	-	-	-	-	00	na	-
Alameda	-	-	-	-	-	00	na	-

The following tables provide information about the characteristics of the fire chiefs and the followers. The gender distribution of the fire chiefs

was 94.73% (n=18) male and 5.26% (n=1) female. The gender distribution of the followers was 9.4% (n=11) female and 90.5% (n=106) male.

Table 3.
Fire Chief Characteristics "a"

Fire chief ethnicity			Promoted from within			Educational level		
Caucasian	15	78.9%	Yes	10	52.6%	1-3 yrs. College	2	10.5%
Black	3	15.8%	No	9	47.4%	College graduate.	11	57.9%
Hispanic	1	5.3%				Advanced degree	6	31.6%
	n=19	100%		n=19	100%		n=19	100%

Table 4.
Fire Chief Characteristics "b"

Fire chief age			Yrs. in the fire service			Yrs. as chief in this org.		
40-44	1	5.3%	20-24	2	10.5%	<1	1	5.3%
45-49	6	31.5%	25-29	10	52.6%	1-4	10	52.6%
50-54	9	47.4%	30-34	5	26.3%	5-9	6	31.6%
55-59	1	5.3%	35-39	1	5.3%	10-14	0	0%
60-64	2	10.5%	40-45	1	5.3%	15-19	2	10.5%
	n=19	100%		n=19	100%		n=19	100%

Table 5.
Follower Characteristics "a"

Primary responsibility			Educational level		
Administration	72	60.5%	High school graduate	3	2.5%
Line	10	8.4%	1-3 yrs. College	44	37.0%
Combination	35	29.4%	College graduate.	54	45.4%
Missing data	2	1.6%	Advanced degree	16	13.4%
			Missing data	2	1.7%
	n=119	100%		n=119	100%

Table 6.
Follower Characteristics-"b"

Follower age			Yrs. in the fire service			Yrs. worked for this chief		
25-34	3	2.5%	<10	15	.12.6%	1	32	26.9%
35-39	13	10.9%	10-14	12	10.1%	2	19	16.0%
40-44	20	16.8%	15-19	18	15.1%	3	24	20.2%
45-49	31	26.1%	20-24	25	21.0%	4	9	7.6%
50-54	39	32.8%	25-29	28	23.5%	5-9	26	21.8%
55-59	8	6.7%	30-34	15	12.6%	10-14	4	3.5%
60-64	3	2.5%	35-39	4	3.4%	15-19	1	.8%
						20-25	1	.8%
Missing data	2	1.7%	Missing data	2	1.6%	Missing data	3	2.5%
	n=119	100%		n=119	100%		n=119	100%

Table 7.
Follower Characteristics-"c"

Follower ethnicity		
Asian	3	2.5%
Black	10	8.4%
Caucasian	83	69.7%
Hispanic	16	13.4%
Native American Indian	1	.8%
Other	2	1.7%
Missing data	4	3.4%
	n=119	100%

Research Question 1. "What areas of fire department administration capture the attention of today's fire chiefs?"

This section presents the responses to the three interview questions, which probed into the areas of particular concern to California fire departments and their leadership. The questions asked about leadership program efforts, the challenges facing today's fire administration, and finally for advice on executive fire service leadership. During the field visits, the

issues brought forth by the chiefs and senior staff members include items that cluster into five general areas.

- Leader self-development
- Leadership approach
- Department member development
- Organizational development
- Department's role in the community

Tables 8, 9, and 10 use a five-frame taxonomy (Human resource, Symbolic, Structural, Political, and Performance) to classify the responses under the three questions. The above five clusters further categorize, where appropriate, the responses by focusing them in a particular arena for action by the reader.

The Human Resource Frame

Leader self-development

Under this category, the chiefs were particularly mindful of keeping an open mind, seeking all viewpoints, and listening to their staff. Other significant comments were to have the courage to do the right thing for the department and acknowledge it when you are wrong or do not know the answer. The chiefs also provided a list of personal traits and actions which were felt to be important, including: personal accountability and responsibility, honesty, openness, fairness, finding a balance, provide leadership, and do not take it personally. One chief stated that he was becoming increasingly aware of the physical toll that comes with the job, and

he was doing more to maintain his personal fitness and health. The chief should develop an emotional commitment to the department. Lastly, the fire chief should demonstrate values to the members of the department and the community.

Leadership approach

In this area, several chiefs commented on the importance of inclusive management styles, seeking member participation, developing staff cohesiveness, and having diverse representation in the decisionmaking of the department. The value of being a fire service family as an area of importance was consistent among leaders.

Department member development

The respondents encouraged leaders to find and use the talent lying within the department. Develop staff and the department membership in the areas of communication, diversity, officer's training, succession planning, and dealing with difficult personalities.

Organizational development

This category considers the broader needs of the agency. The comments in this area again echoed the need for active inclusion and participation, countering workforce apathy, dealing with leadership attrition, and problems associated with motivating line leaders to cross into staff leadership positions.

The Symbolic Frame

Leader self-development

Many of the chief officers noted the importance of developing a vision for the department and communicating that vision. These officers also noted the significance for the chief, as the appointed and symbolic leader of the organization, to lead and develop by example and recognize and adhere to a set of higher standards. For those chief officers coming into an organization many respondents recommended the "new" chief learn the department's history, traditions, culture, institutional history, and place in the surrounding community and region. Lastly, the respondents counsel, do not forget the roots, from which you came.

Leadership approach

Under this lens, several comments focused around the need for the management team to communicate expectations clearly, demonstrate commitment to the department and develop and maintain integrity in leadership and managerial practice.

Organizational development

The values associated with organizational development include the inclusion of a high work ethic, high member morale, and a philosophy of department-wide accountability among its members. Areas of concern included low morale, loss of departmental identity in the wake of

consolidations or regionalism, and a changing focus in the fire service from a "we" to a "me" perspective.

Department's role in the community

Since September 11, 2002 fire departments have played an even larger symbolic role in the community than ever before. Many leaders discussed their formal role as a community participant and leader; they frequently commented on the high marks their departments received in city-administered citizen/customer satisfaction surveys. The respondents recognized that firefighters are generally not known, personally, but rather known as a symbol and instrument of their community's safety workforce.

The Structural Frame

Leadership approach

Under the Structural Frame, the chiefs identified several areas for leadership development. Among the more common themes was team development at the staff level, supporting staff, thinking and acting outside the box, and using goals and objectives to drive action. The chiefs also emphasized the importance of appointing the "right people to positions of authority", consulting with labor, making consistent decisions, and developing a long-term vision.

Department member development

In the area of subordinate development, the need for development of analytic tools and competencies, improving administrative personnel incentives, and moving from experience-based decisionmaking to data driven

decisionmaking were among the most important. Causes for concern in this area include the lack of stability following personnel changes or retirements, difficulty filling leadership positions from line personnel, being able to sustain action on many fronts simultaneously, and staying engaged in the process.

Organizational development

Programmatic triage, mandates, and sustainable revenues are among the list of organizational development concerns. The leaders also identified maintaining a stable workforce, improving technology, establishing agency parameters, and "moving target" policy as structural issues that deserve attention at the organizational level. Lastly, remembering that although the operation of a fire department is a collective effort, on a daily basis the line executes the core missions and staff supports those missions.

The Political Frame

Leader self-development

For the CEO of a fire department, learning the landscape of the city, county, and region is a necessary exercise. For some fire chiefs realizing that the boss cannot be a friend to all, recognizing the management/line split, and dealing with contentious personnel issues comes at a high price, both personally and professionally.

Leadership approach

Being a department head in a city is somewhat of a balancing act and the role of department advocate and city management team player is often a tightrope fire chiefs must learn to walk. Some of the leaders recommend

keeping labor advised of issues, but note one must remember that the fire chief is the CEO.

Organizational development

At the organizational level the chiefs pointed out the need to bring focus to the real issues, continue to positively develop labor/management relations, foster positive relations with other city departments, council members, and business. Of concern to the respondents was competition and divisiveness among department heads in the city, poor relations with the city manager or mayor, the contentious political climate in the city, and a lack of trust among city department heads. Finally, the effects of hiring the next chief from outside the agency caused some concern.

Department's role in the community

In this area, all of the chief officers were in agreement that maintaining proactive and positive citizen/customer relations was extremely important. In most of the cities, a customer satisfaction survey of some sort was used and was the basis for bragging rights. All of the leaders noted an increase in scope of programs and service delivery expectations. This evolution to "all risk agencies" thrusts the fire department into greater public light and scrutiny.

The Performance Frame

Leader self-development

As noted by one chief, the increased scope of work in today's fire service results in increased risk for firefighters. It is this increased risk for

department personnel and the personal consequences of carrying that stress around day in and day out that may produce short fire chief tenures.

Department member development

Considering the expanded role fire departments play in many communities, the leaders identified the need to develop in their staff skills of networking, working collaboratively across disciplines, developing entrepreneurial partnerships.

Organizational development

Considering that all of the departments interviewed participate in the ICMA Comparative Performance studies, it was surprisingly rare that performance measurement was identified as an issue. Only in two departments was performance measurement used on a regular basis for analysis or decisionmaking. The chiefs noted a trend of decreasing incumbency job tenure among the agencies. The lack of sufficient field experience causes concern for both the safety of the workforce and that of the citizenry.

Tables 8, 9, and 10 show the respondent's answers, by interview question. In these tables, the five analytic frames have been used to classify the responses, noting the frequency of each response. Figures 6, 7, and 8 follow their related table and illustrate the percentage breakdown of responses under the frames. Based on the numbers of responses by frame, it is interesting to view the significance of each frame change by interview question.

Table 8.
What About The Fire Department Is Important To Today's Chief Officers?

HUMAN RESOURCE FRAME		Frequency
Inclusive management		6
Member participation		6
We value our employees like family		5
Diverse representation on issues/solutions		3
Commitment to improve diversity within the department		2
Member education/training development		2
Physical fitness program		2
Peer mediation program		1
Staff cohesiveness		1
Succession planning program		1
EVOC		1
Officers' training program		1
Rookie firefighter academy		1
	Total	32
SYMBOLIC FRAME		
District work ethic		5
Chief's leadership		3
Department's history		3
High member morale		2
Commitment from management down		1
Integrity among the management team		1
Philosophy of accountability among staff and line		1
Regional leader in the fire service		1
	Total	17
STRUCTURAL FRAME		
Actually using goals and objectives to drive action		2
Fire Prevention Bureau improvements		2
Thinking and acting outside of the box		2
Added analytic staff		1
Change from experienced based decisionmaking to data driven		1
EMS program		1
Records management system		1
Stable workforce		1
Strong finances		1
	Total	12

Continued next page.

Table 8-*Continued*

POLITICAL FRAME		
High citizen satisfaction		7
Entrepreneurialsm		5
Community business relations		4
Labor management relations		3
Relationship with city council		1
	Total	20
PERFORMANCE FRAME		
Service delivery		6
Paramedic program		5
Expansion of scope of services		4
Entrepreneurial partnerships		3
New facilities and apparatus		3
Performance measurement's link to work		2
USAR team		2
Apparatus replacement program		1
Haz/mat team		1
Truck company staffing improvement		1
Vegetation management program		1
	Total	29

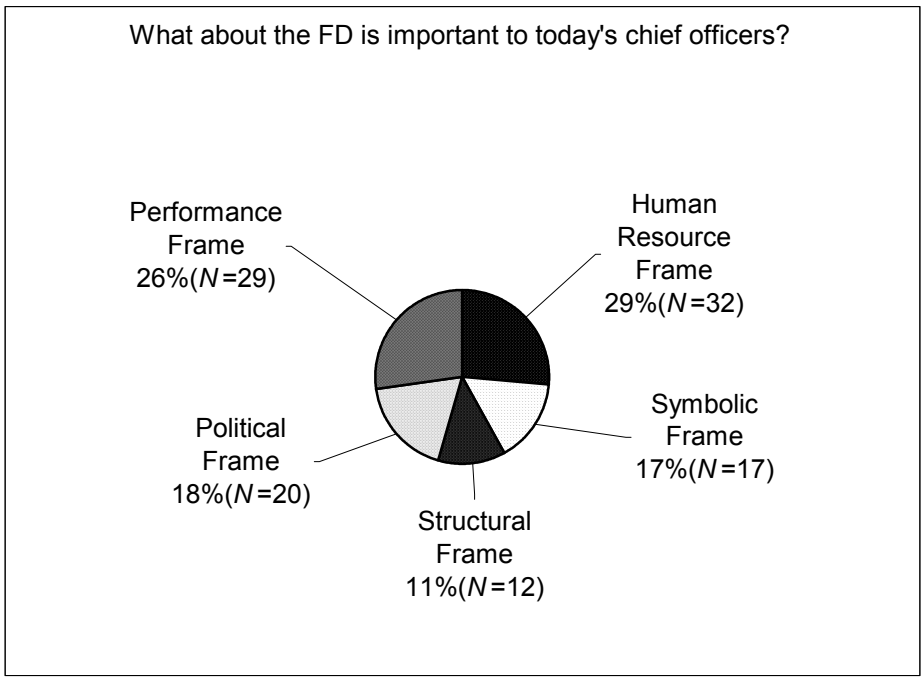


Figure 6. Percentage Breakdown Of The Frames When Answering The Question, “What About The FD Is Important To Today’s Chief Officers?”

Table 9.
What Are The Major Challenges For Today's Chief Officers?

HUMAN RESOURCE FRAME	**Frequency**
Physical and emotional demands of the job on the membership	2
Acquiring communication skills for managers	1
Apathy in the fire service	1
Dealing with difficult personalities	1
Leadership attrition	1
Workforce cohesiveness	1
Total	7
SYMBOLIC FRAME	
Changing focus from public service to a "me" attitude	2
Low morale	1
Perception of identity loss due to regionalization	1
Total	4
STRUCTURAL FRAME	
Lack of stability in organization following personnel moves	3
Programmatic triage	3
Trouble filling leadership roles from line personnel	3
Attrition due to low wages or cost of living	2
Lack of long-term vision and planning	2
Programmatic mandates	2
Being able to sustain action	1
Changing policy direction	1
Establishing organizational parameters	1
Keeping engaged in the process	1
Needed capital improvements	1
Potential for declining revenues	1
Total	21
POLITICAL FRAME	
Chasm created over personnel issues between mgt. And line	4
Divisiveness among city departments	3
Poor relations with city council/city manager	3
Diminishing community connection	2
Management/line leadership split	2
Contentious political climate in city	1
Effects of hiring the next chief from the outside	1
Lack of trust between division heads	1
Total	17

Continued next page.

Table 9-*Continued*

PERFORMANCE FRAME	
Increasing scope and demands w/o commensurate resources	5
Safety of firefighters due to lack of experience	4
Personal concern for citizen and firefighter safety	2
Community risk	1
High arson rate	1
Total	13

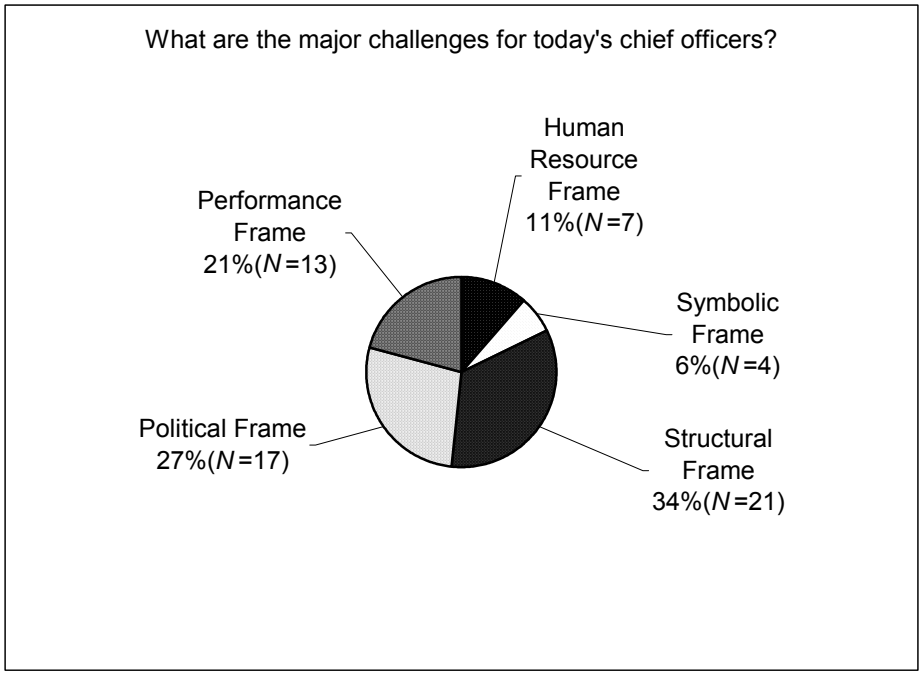


Fig. 7. Percentage Breakdown Of The Frames When Answering The Question, “What Are The Major Challenges For Today’s Chief Officers?”

Table 10. What Advice On Leadership Do Today's Chief Officers Have To Offer?

HUMAN RESOURCE FRAME	Frequency
Keep an open mind and seek all viewpoints	7
Listen to staff	5
Have the courage to do the right thing for the department	4
Acknowledge it when you're wrong or don't know	2
Be accountable	2
Be fair	2
Be honest	2
Be open	2
Don't take it personally	2
Provide leadership	2
Value people and demonstrate this value	2
Develop an emotional commitment to the department	1
Find a balance	1
Find the talent within the organization	1
Keep your eye on the ball	1
Take responsibility	1
Total	37
SYMBOLIC FRAME	
Develop a vision and communicate that vision	5
Lead and develop by example	4
Learn the department's history and traditions	4
Executive leadership behavior has higher standards	3
Get out to see the members	3
Communicate behavioral expectations clearly	2
Learn the department's culture	2
Do not forget your roots	1
Do not publicly criticize the department	1
Learn institutional history	1
Total	26
STRUCTURAL FRAME	
Build a team	2
Develop inclusion of members in the process	2
Support your staff	2
Appoint the right people	1
Consult with labor	1
Develop the goals and objectives to match the vision	1

Continued next page.

Table 10-*Continued*

STRUCTURAL FRAME (con't)	
Ensure adequate funding	1
Make consistent decisions	1
Staff supports the line, not the other way around	1
Use creativity to retain members	1
Total	13
POLITICAL FRAME	
Learn the landscape of the county	2
The FD serves the community, not the other way around	2
You cannot be a friend to all	2
Balance role between the city and the FD appropriately	1
Focus on the real issues	1
Keep labor advised of issues, but you run the department	1
Total	9

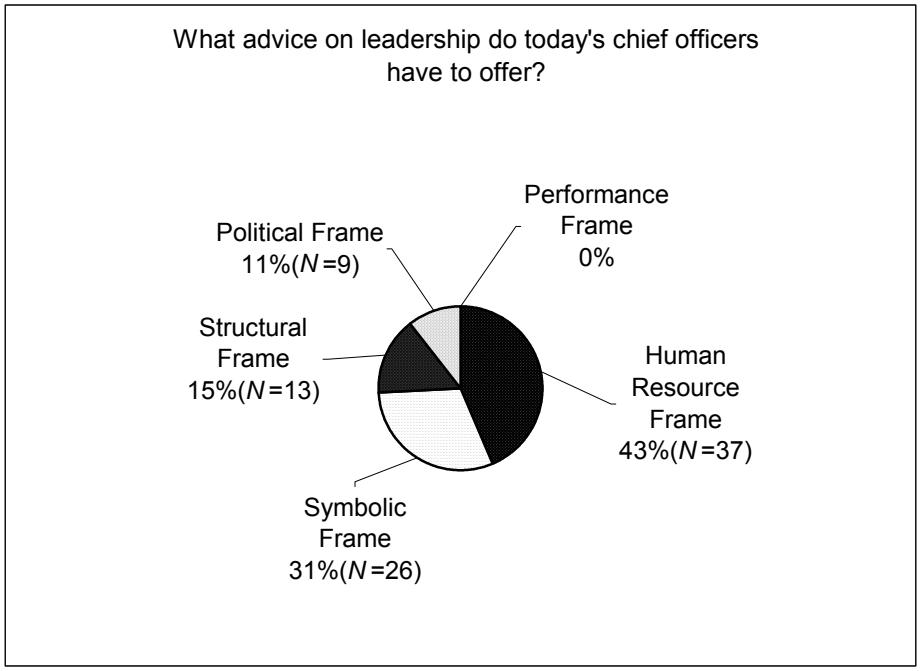


Fig. 8. Percentage Breakdown Of The Frames When Answering The Question, "What Advice On Leadership Do Today's Chief Officers Have To Offer?"

Table 11.
Comparison Of Interviewee Responses By Analytic Frames

Interview Question Areas	Human Resource	Symbolic	Structural	Political	Performance	(%) (N-Total)
Areas of importance	29% (N=32)	11% (N=17)	11% (N=12)	18% (N=20)	26% (N=29)	(100%) (N=110)
Challenges	11% (N=7)	6% (N=4)	34% (N=21)	27% (N=17)	21% (N=13)	(100%) (N=62)
Leadership advice	43% (N=37)	31% (N=26)	15% (N=13)	11% (N=9)	0% (N=0)	(100%) (N=85)

Summary

The results supporting interpretations and conclusions regarding question one have been presented using a classification approach that places interview responses by leader self-development, leadership approach, department member development, organization development, and the department's role in the community under the five analytic frames. These qualitative results will be melded together with the more quantitative findings of research questions two and three to demonstrate what characteristics and competencies will be important to future fire chiefs in the next chapter.

Research Question 2. "What are the relationships between fire chief characteristics and their perceived leadership effectiveness, as viewed by their followers?"

This next section answers Question Two by presenting the results found pertaining to P_1, H_1, and H_2. Proposition $_1$ and each of the Hypotheses are presented by first restating the premise, then describing the variable

relationships with accompanying tables identifying raw data comparisons and statistical test scores. All variable relationships are tested using Somers' d, Kendall's tau-b, Gamma, and Spearman coefficients. A significance threshold of 0.05 is used. Also, each variable relationship is illustrated by using a figure comprising of a four-square scatterplot with variable mean score XY axis overlay. The figures are defined by High/High (HH), High/Low (HL), Low/High (LH), and Low/Low (LL) quadrants. Only significant variable relationships are included.

Proposition $_1$- Ratings of employees' productivity are related to employees' perceptions of their fire chief's leadership effectiveness.

Proposition $_1$, as a comparison of the LEA factors to the employees rating of their own perception of productivity resulting from the effectiveness of the fire chief, was found to have significant relationships between ratings of productivity and Team Building Behavior* (TBB), Mission Oriented Behavior* (MOB), Relationship Behavior**(REL), Character* (CHAR), Forcefulness** (FOR), Industrious* (IND), Authoritative* (AUT), Partner* (PAR), and Straightforwardness** (STR) (*P<.000, **P<.050). Table 12 identifies these leadership factor scores. Missing from this list are Empowerment Behaviors (EMP), Dependable (DEP), Calming Influence (CAL), Delegator (DEL), Followership (FOL), Friend (FRI), Enjoyableness (JOY), and Organizational Outreach (OUT).

Table 12.
P_1 statistical relationships showing the association between "Best Productivity" and select LEA measures.

		Best productivity		
LEA Factor	**Method**	**Value**	**Std. Error**	**P-Value**
TBB	Somers' d	.675	.118	.000
	Kendall's tau-b	.681	.120	.000
	Gamma	.695	.122	.000
	Spearman	.823	.109	.000
MOB	Somers' d	.655	.096	.000
	Kendall's tau-b	.665	.101	.000
	Gamma	.675	.107	.000
	Spearman	.840	.087	.000
REL	Somers' d	.456	.156	.003
	Kendall's tau-b	.463	.158	.003
	Gamma	.470	.162	.003
	Spearman	.573	.193	.010
CHAR	Somers' d	.655	.062	.000
	Kendall's tau-b	.665	.063	.000
	Gamma	.675	.065	.000
	Spearman	.863	.040	.000
FOR	Somers' d	.374	.158	.018
	Kendall's tau-b	.380	.162	.018
	Gamma	.386	.165	.018
	Spearman	.517	.136	.023
IND	Somers' d	.618	.090	.000
	Kendall's tau-b	.625	.095	.000
	Gamma	.636	.099	.000
	Spearman	.801	.083	.000
AUT	Somers' d	.696	.054	.000
	Kendall's tau-b	.705	.057	.000
	Gamma	.720	.058	.000
	Spearman	.879	.047	.000
PAR	Somers' d	.582	.092	.000
	Kendall's tau-b	.589	.093	.000
	Gamma	.600	.095	.000
	Spearman	.778	.094	.000
STR	Somers' d	.535	.157	.001
	Kendall's tau-b	.542	.158	.001
	Gamma	.552	.161	.001
	Spearman	.644	.207	.003

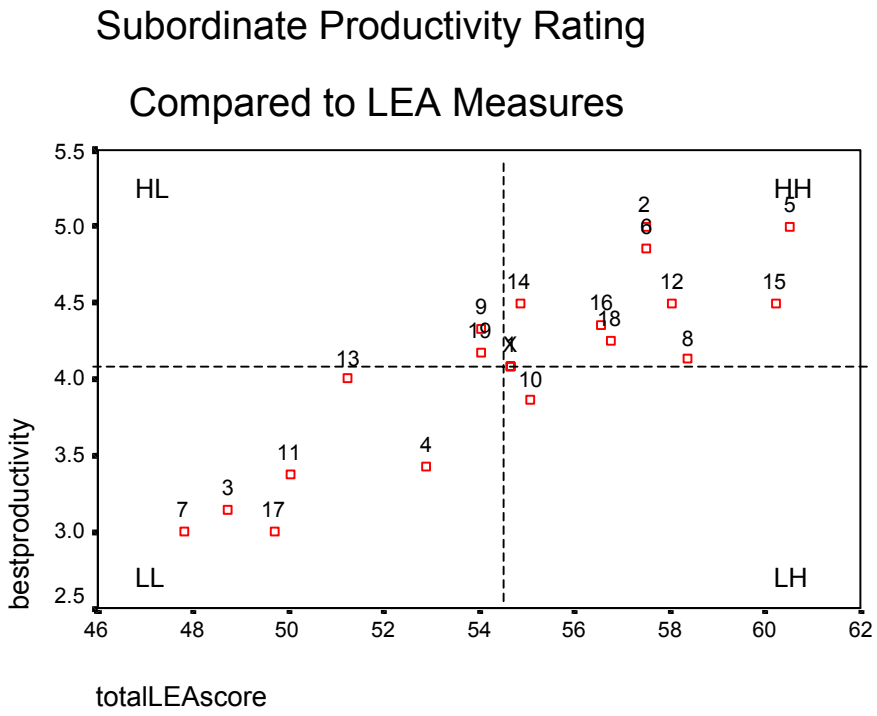


Fig. 9. Ratings of Best Productivity Compared to Total LEA Score

Figure 9 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the aggregate mean LEA score in all behavior factors ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Total LEA score is 54.66 with a standard deviation of 3.79.

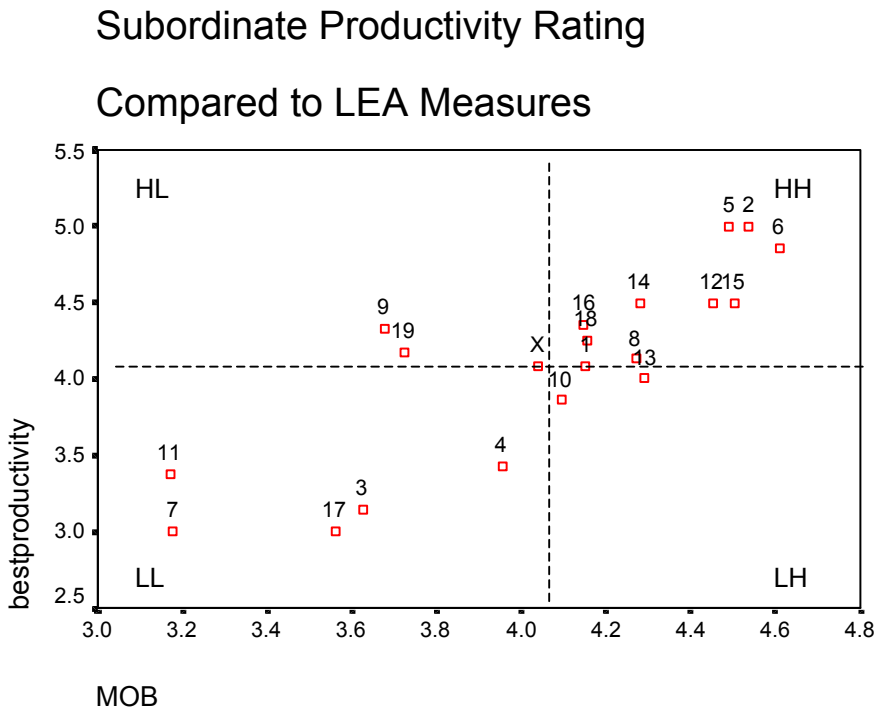


Fig. 10. Ratings of Best Productivity Compared to Mission Oriented Behavior

Figure 10 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA composite factor Mission Oriented Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Mission Oriented Behavior is 4.05 with a standard deviation of 0.44. Mission Oriented Behavior is comprised of the LEA subfactors Forcefulness, Industriousness, Dependability, and Authoritative.

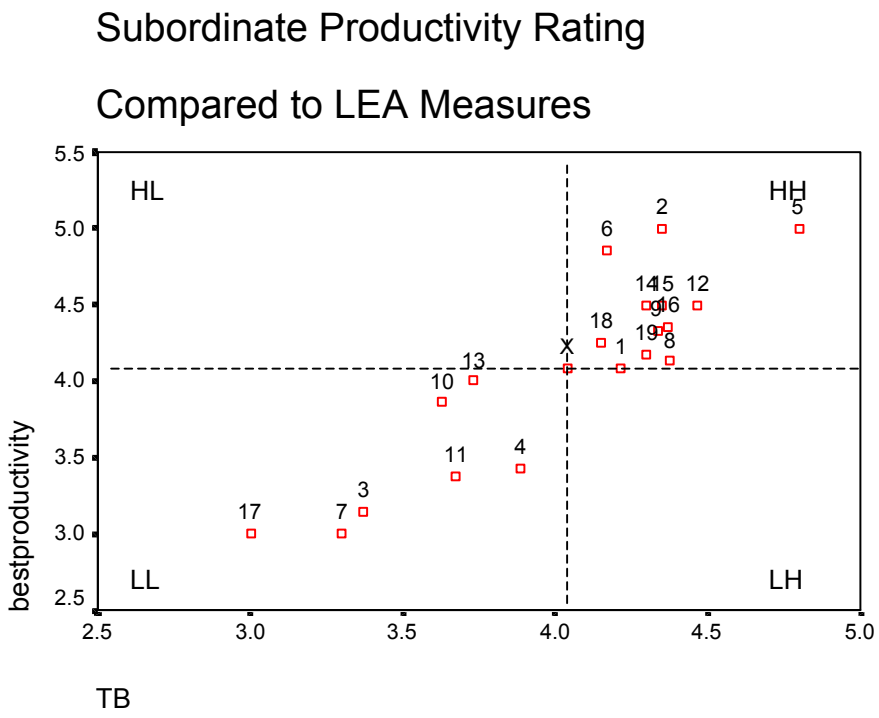


Fig. 11. Ratings of Best Productivity Compared to Team Building Behavior

Figure 11 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA factor Team Building Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Team Building Behavior is 4.04 with a standard deviation of 0.47.

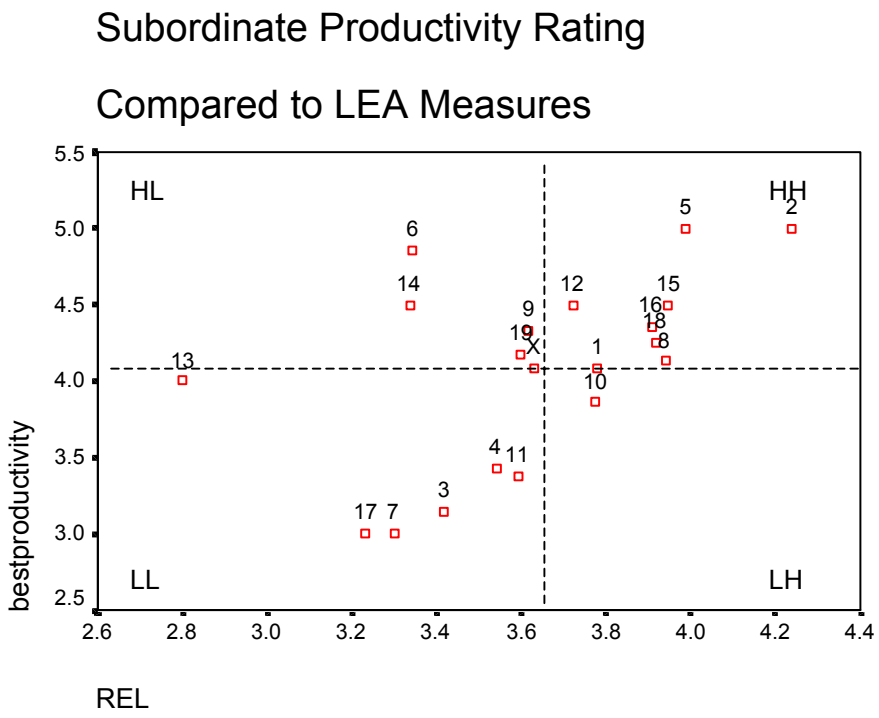


Fig. 12. Ratings of Best Productivity Compared to Relationship Behavior

Figure 12 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA composite factor Relationship Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Relationship Behavior is 3.63 with a standard deviation of 0.34. Relationship Behavior is comprised of the LEA subfactors Partner, Friend, Enjoyableness, and Organizational Outreach.

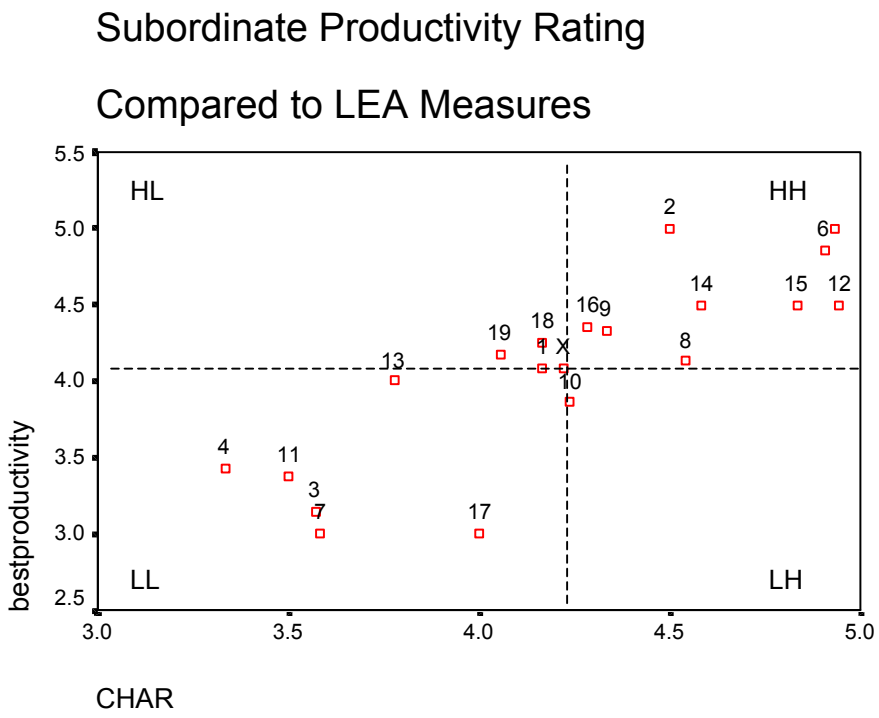


Fig. 13. Ratings of Best Productivity Compared to Character

Figure 13 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA factor Character (P<.000). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Character is 4.22 with a standard deviation of 0.51.

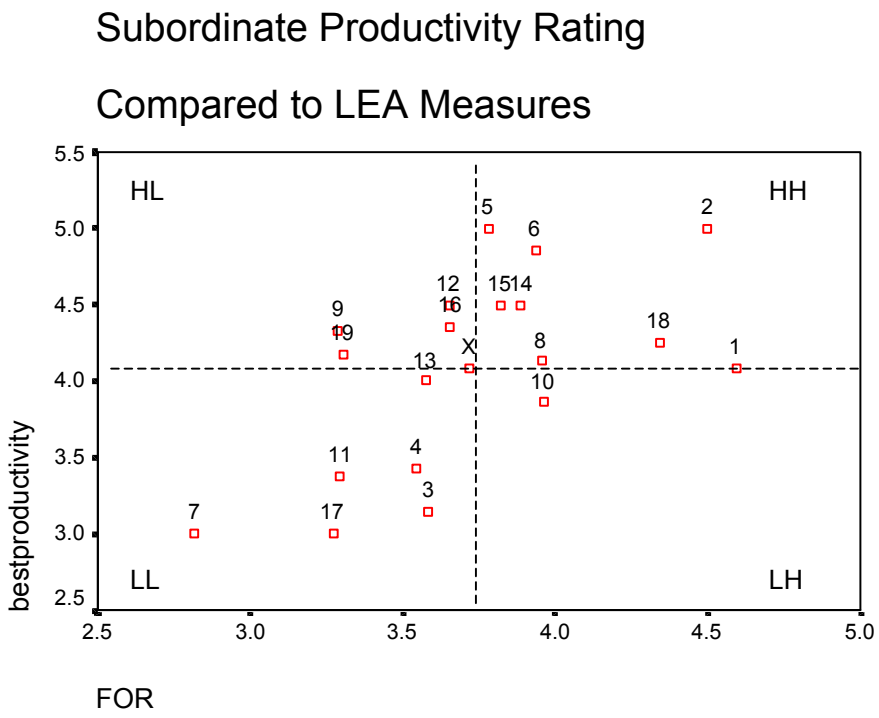


Fig. 14. Ratings of Best Productivity Compared to Forceful Behavior

Figure 14 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA subfactor Forcefulness Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Forcefulness Behavior is 3.72 with a standard deviation of 0.45.

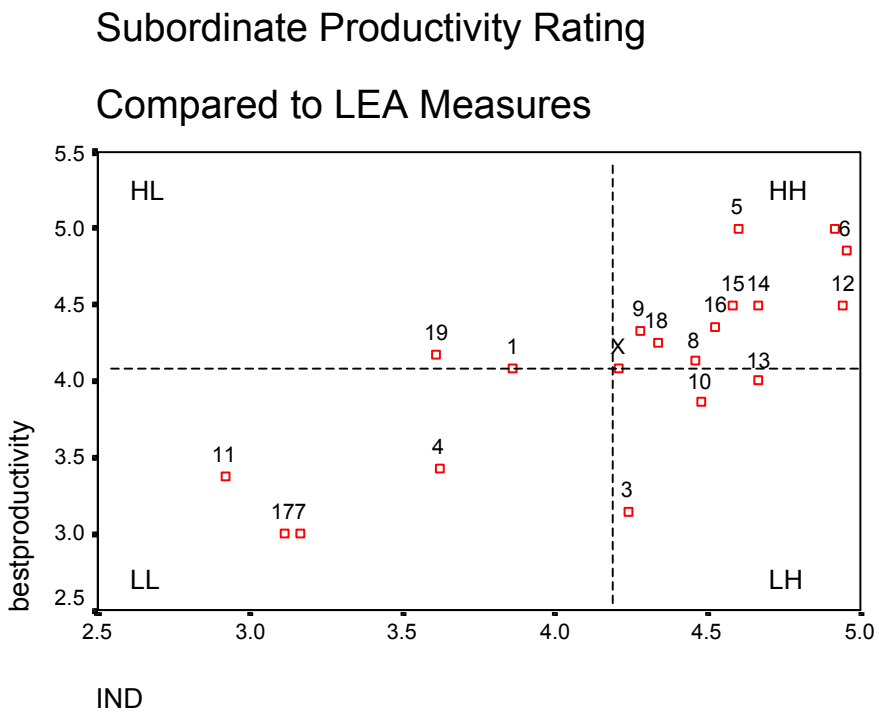


Fig. 15. Ratings of Best Productivity Compared to Industrious Behavior

Figure 15 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA subfactor Industrious Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Industrious Behavior is 4.21 with a standard deviation of 0.64.

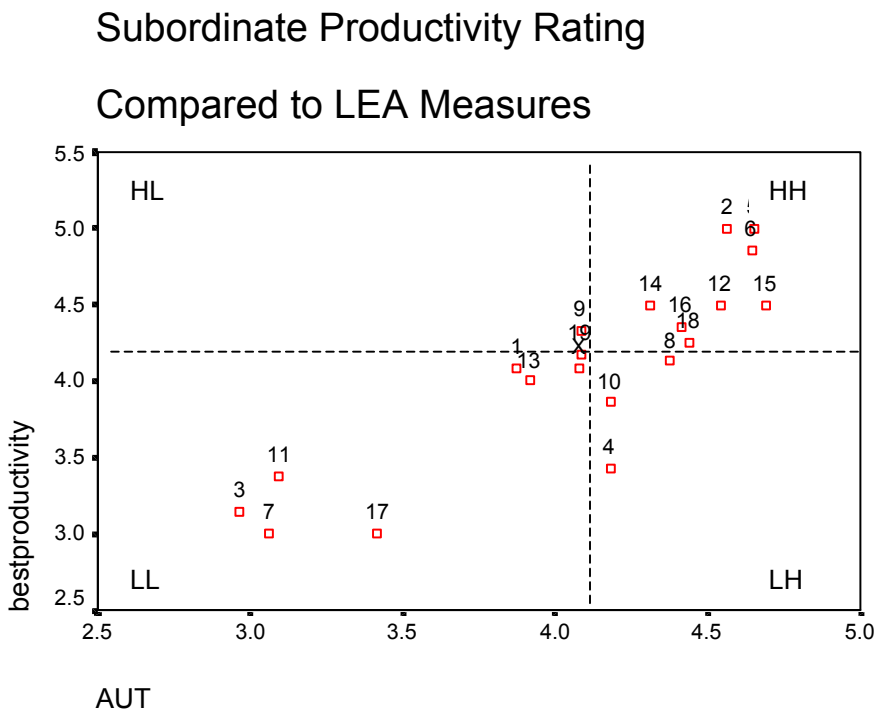


Fig. 16. Ratings of Best Productivity Compared to Authoritative Behavior

Figure 16 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA subfactor Authoritative Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Authoritative Behavior is 4.078 with a standard deviation of 0.56.

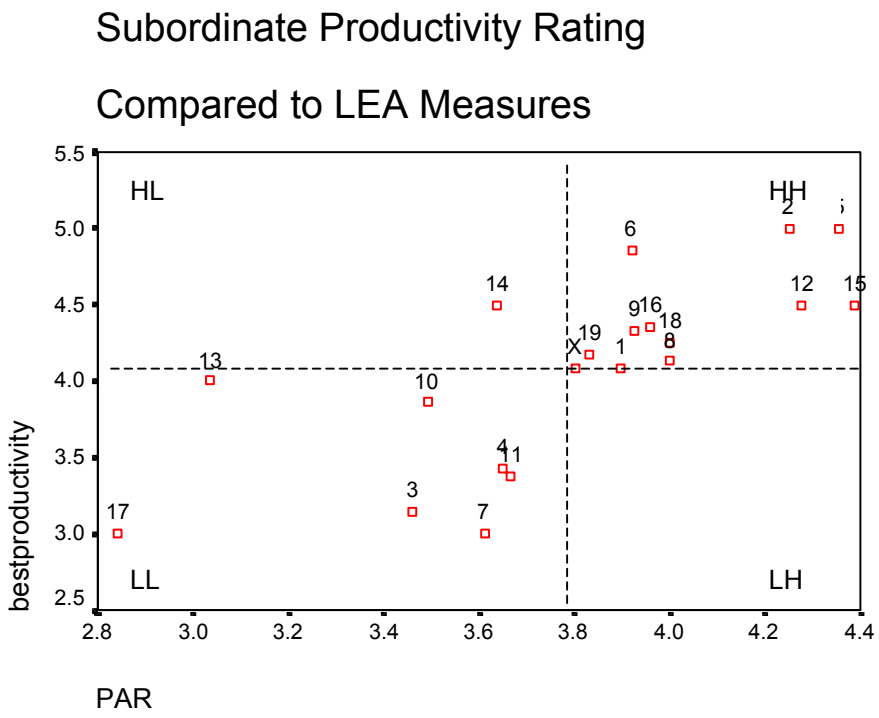


Fig. 17. Ratings of Best Productivity Compared to Partner Behavior

Figure 17 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA subfactor Partner Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Partner Behavior is 3.8 with a standard deviation of 0.41.

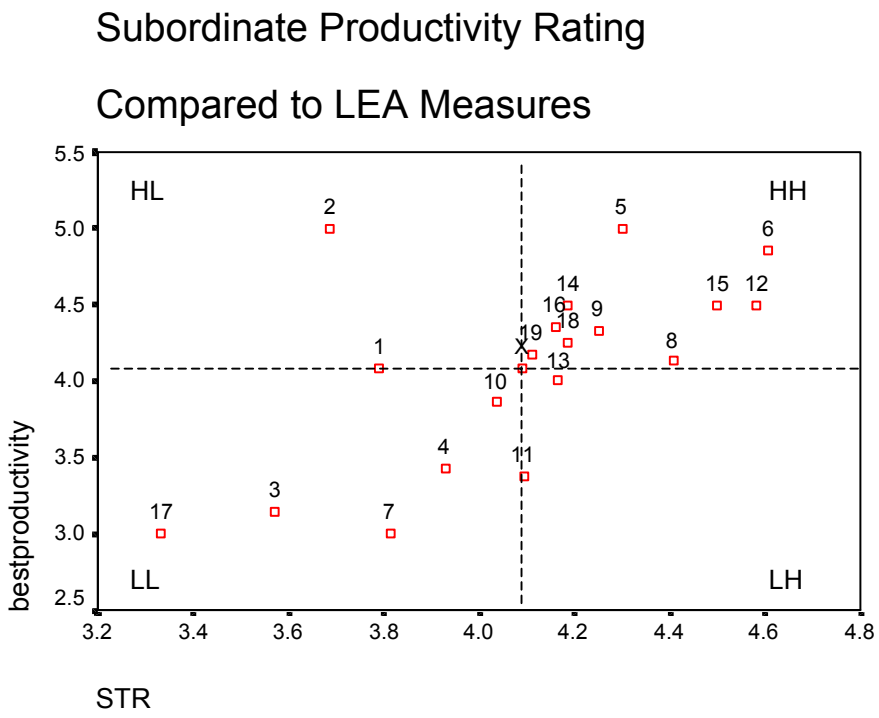


Fig. 18. Ratings of Best Productivity Compared to Straightforwardness Behavior

Figure 18 identifies a positive significant relationship between the subordinate's perception of his/her own productivity and the LEA subfactor Straightforwardness Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable best productivity is 4.08 with a Standard deviation of 0.63. The mean for the variable Straightforwardness Behavior is 4.09 with a standard deviation of 0.34.

Hypothesis $_1$- The fire chief's tenure is related to employees' perceptions of their fire chief's leadership effectiveness.

Hypothesis $_1$ compares LEA factors to the fire chief's tenure as a fire chief in the organization. There are significant relationships between fire chief tenure and *Empowerment behavior (EMPB), **Calming Influence Behavior (CAL), and **Friend Behavior (FRI) (*P<.000, **P<.050). All of these factors have a negative relationship with fire chief tenure, based on the crosstabulation statistical tests. The LEA survey categorized tenure in the following manner: "Years as fire chief in this organization?" less than 1 year, 1-4 years, 5-9 years, 10-14 years, 15-19 years, and 20 years or more. In the sample population, there was one chief with less than one year, ten with one to four years, six with five to nine years, and two with fifteen to nineteen years of service as chief of their department.

Table 13 identifies the fire chiefs in descending order by aggregate LEA score compared to tenure. The high scoring participants are on the top of the table. As the table shows, there are only two fire chiefs with greater than four years of tenure above the median point. This table underscores the negative relationships found between the LEA factors and tenure in Table 14.

Table 13.
Fire chief tenure and LEA score by rank order.

Leader Sub code	Total LEA Score	Years as Fire Chief
5	60.52	1 to 4
15	60.22	1 to 4
8	58.38	5 to 9
12	58.05	1 to 4
6	57.52	1 to 4
2	57.49	5 to 9
18	56.75	1 to 4
16	56.58	1 to 4
10	55.08	1 to 4
14	54.85	5 to 9
1	54.67	5 to 9
9	54.06	1 to 4
19	54.04	<1
4	52.90	5 to 9
13	51.24	15 to 19
11	50.04	1 to 4
17	49.70	15 to 19
3	48.73	1 to 4
7	47.80	5 to 9
median	54.85	
mean	54.66	
std.dev.	3.79	

Table 14.
H_1 statistical relationships showing the association between fire chief tenure and select LEA measures.

		Fire chief tenure		
LEA Factor	**Method**	**Value**	**Std. Error**	**P-Value**
EMPB	Somers' d	-.335	.112	.000
	Kendall's tau-b	-.417	.115	.000
	Gamma	-.523	.147	.000
	Spearman	-.546	.148	.016
CAL	Somers' d	-.211	.099	.034
	Kendall's tau-b	-.262	.124	.034
	Gamma	-.327	.157	.034
	Spearman	-.344	.169	.149
FRI	Somers' d	-.327	.135	.015
	Kendall's tau-b	-.408	.159	.015
	Gamma	-.509	.190	.015
	Spearman	-.508	.186	.026

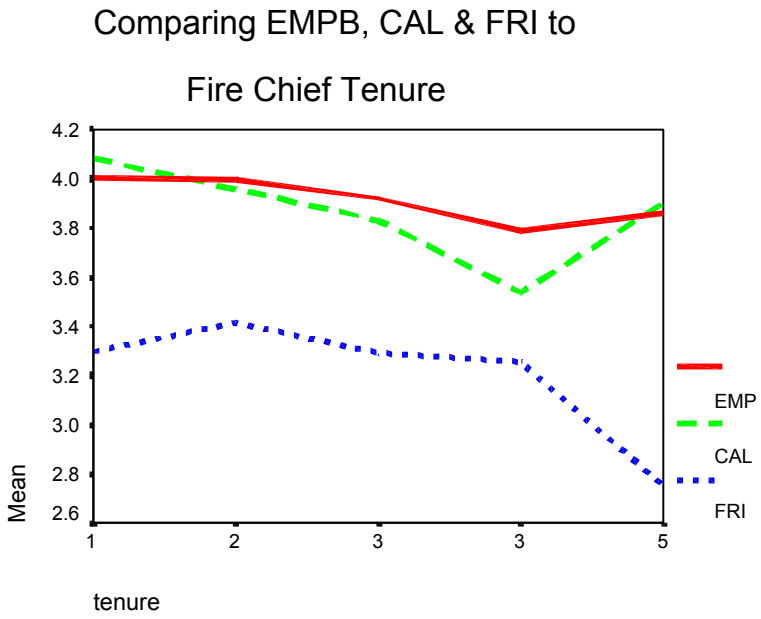


Fig. 19. LEA Factors EMPB, CAL, and FRI compared to Fire Chief Tenure. This figure illustrates the negative relationship between fire chief tenure in the department and the LEA factor Friend Behavior. Interestingly, Empowerment, Calming Influence Behavior rise after 10 years tenure (Tenure axis: 1=< 1 yr., 2=1-4 yrs., 3=5-9 yrs., 5=15-20 yrs.).

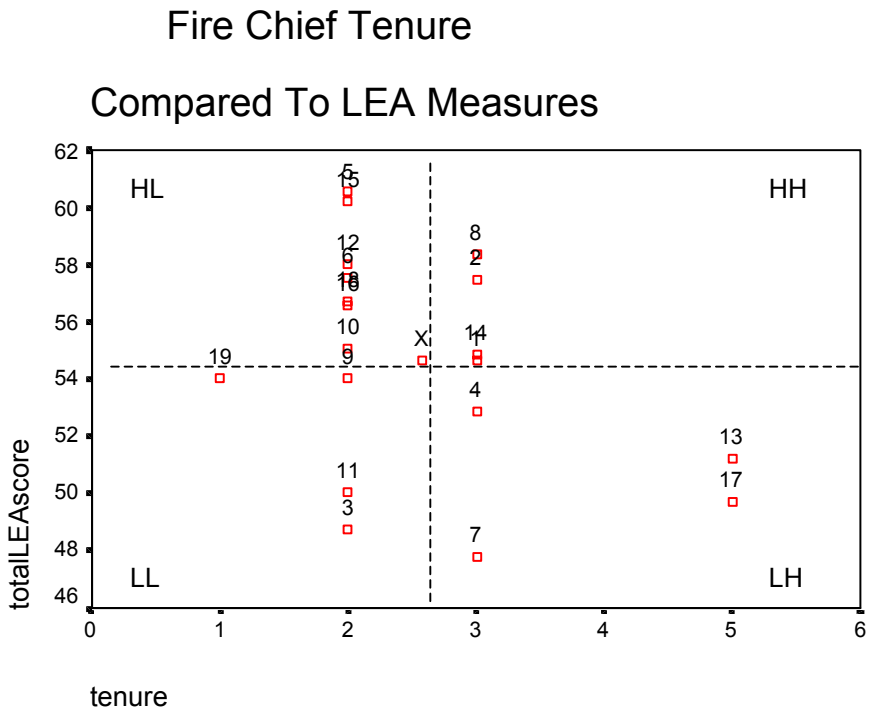


Fig. 20. Ratings of Total LEA Score Compared to Fire Chief Tenure

Figure 20 identifies a relationship (*P*=.195) between fire chief tenure in the organization and the mean aggregate LEA scores. Although this relationship is not within the statistical significance of *P*< 0.05, it does indicate a relationship direction that should not be dismissed without further investigation. The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Total LEA score is 54.66 with a standard deviation of 3.79.

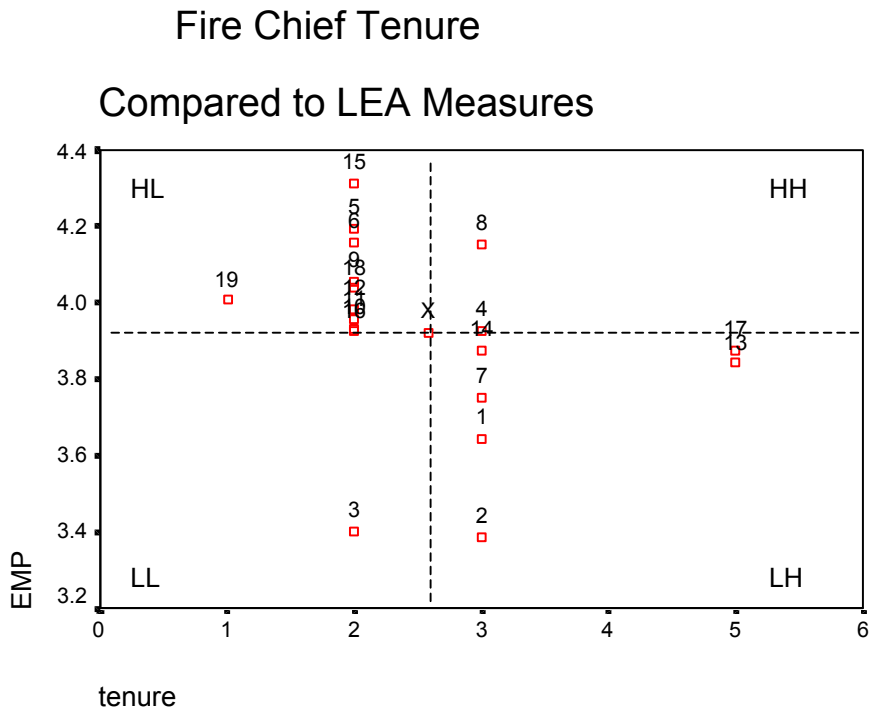


Fig. 21. Ratings of Empowerment Behavior Compared to Fire Chief Tenure

Figure 21 identifies a negative significant relationship between fire chief tenure and the LEA composite factor Empowerment Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Empowerment Behavior is 3.92 with a standard deviation of 0.24. Empowerment Behavior is comprised of the LEA subfactors Calming Influence, Delegator, Followership, and Straightforwardness.

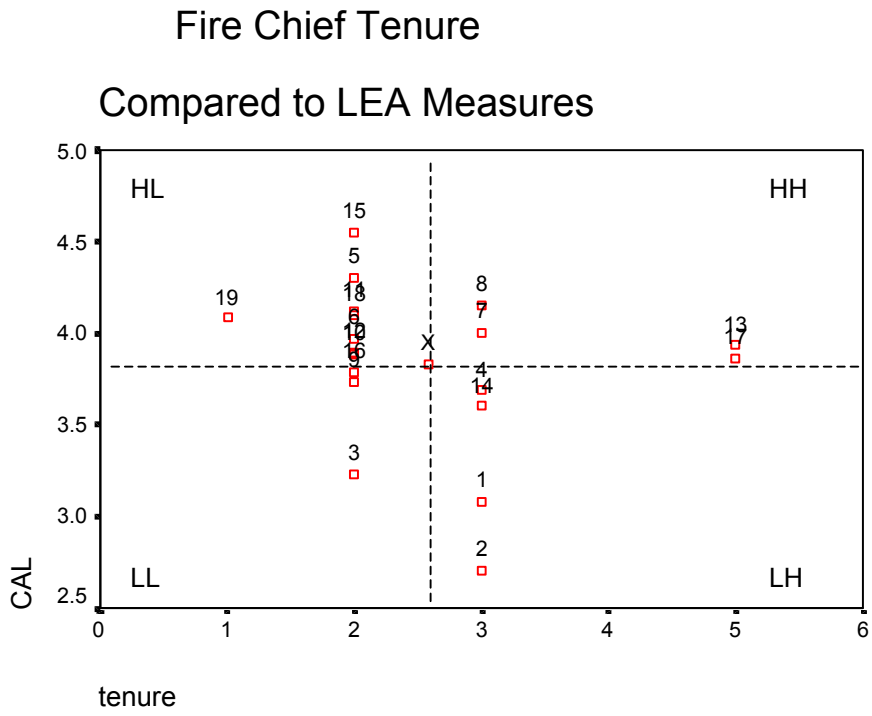


Fig. 22. Ratings of Calming Influence Behavior Compared to Fire Chief Tenure

Figure 22 identifies a negative significant relationship between fire chief tenure and the LEA subfactor Calming Influence Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Calming Influence Behavior is 3.83 with a standard deviation of 0.44.

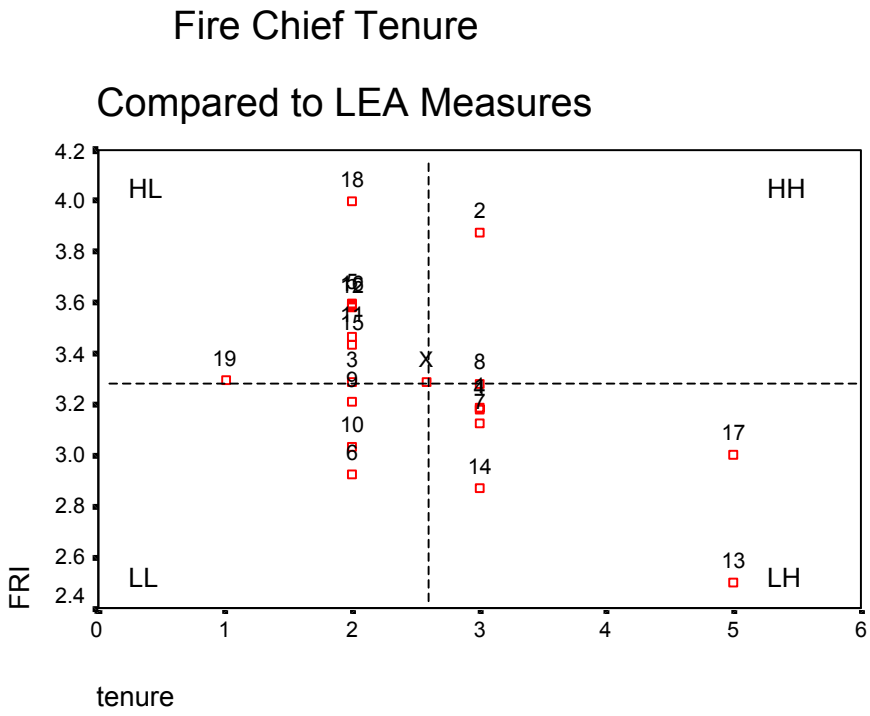


Fig. 23. Ratings of Friend Behavior Compared to Fire Chief Tenure

Figure 23 identifies a negative significant relationship between fire chief tenure and the LEA subfactor Friend Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Friend Behavior is 3.29 with a standard deviation of 0.36.

Hypothesis $_2$- The fire chief's level of education is related to employees' perceptions of their fire chief's leadership effectiveness.

Hypothesis 2 tests the relationships between fire chief education and LEA factors. The LEA factors which were identified as having negative significant relationships with fire chief education are **Relationship Behavior,

**Character, **Straightforwardness Behavior, *Partner Behavior, and **Friend Behavior (*P<.000, **P<.050).

Figure 24 illustrates the negative relationship between these LEA variables and education. Participants responded to the survey by indicating their level of education in one of five categories: 1=less than high school graduate, 2=high school graduate, 3=1-3 years of college, 4=college graduate, and 5= advanced degree. In the sample group, there were two fire chiefs with one to three years of college, eleven with college degrees, and six with advanced degrees.

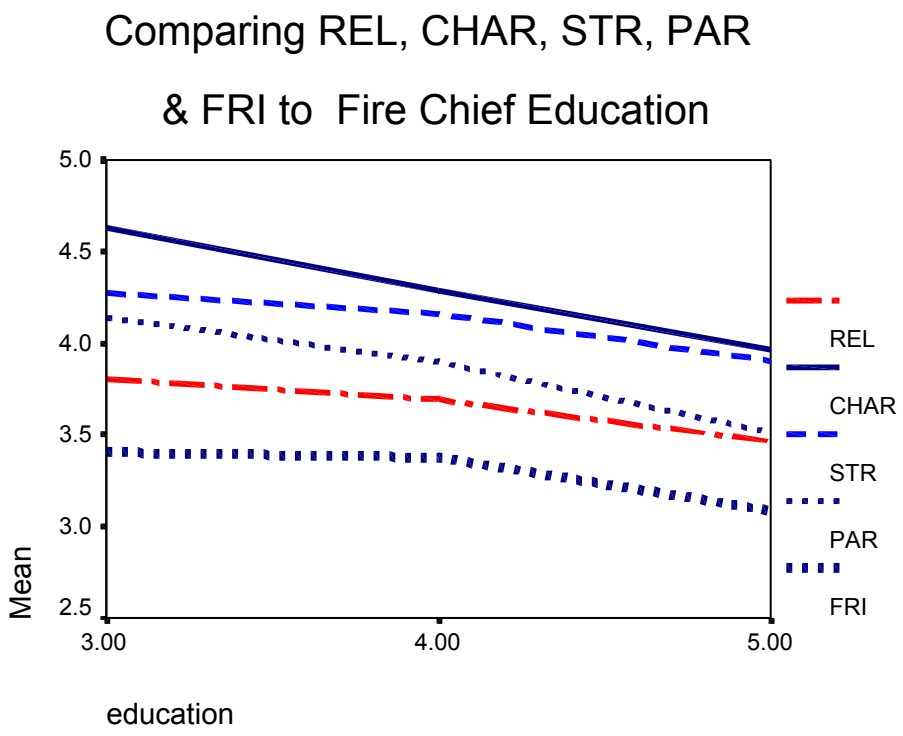


Fig. 24. Comparing REL, CHAR, STR, PAR, and FRI to Fire Chief Education. On the education axis 3=1-3 years of college, 4=college graduate, and 5=advanced degree.

Table 15.
Fire chief education and LEA score by rank order

Leader Sub code	Total LEA Score	Leader Education
5	60.52	1-3 years of college
15	60.22	College graduate
8	58.38	College graduate
12	58.05	College graduate
6	57.52	College graduate
2	57.49	College graduate
18	56.75	College graduate
16	56.58	College graduate
10	55.08	Advanced degree
14	54.85	Advanced degree
1	54.67	College graduate
9	54.06	1-3 years of college
19	54.04	Advanced degree
4	52.90	Advanced degree
13	51.24	College graduate
11	50.04	College graduate
17	49.70	Advanced degree
3	48.73	College graduate
7	47.80	Advanced degree
median	54.85	
mean	54.66	
std.dev.	3.79	

Educational level and the associated aggregate LEA score among the fire chief participants are identified in Table 15. This table shows that there is only one fire chief with an advanced degree above the median. Conversely, there are five at or below the midpoint.

Table 16 shows the results of the statistical tests between educational level and the factors significantly related. As identified under the “value”

column in the table, each of the LEA factors is negatively related to education.

Table 16.
H_2 statistical relationships showing the association between fire chief education and select LEA measures.

		Fire chief's education		
LEA Factor	**Method**	**Value**	**Std. Error**	**P-Value**
REL	Somers' d	-.520	.168	.005
	Kendall's tau-b	-.398	.133	.005
	Gamma	-.520	.168	.005
	Spearman	-.493	.154	.032
CHAR	Somers' d	-.440	.143	.032
	Kendall's tau-b	-.336	.148	.032
	Gamma	-.440	.186	.032
	Spearman	-.417	.177	.075
PAR	Somers' d	-.640	.112	.000
	Kendall's tau-b	-.491	.116	.000
	Gamma	-.640	.142	.000
	Spearman	-.604	.134	.006
STR	Somers' d	-.450	.115	.008
	Kendall's tau-b	-.345	.119	.008
	Gamma	-.455	.146	.008
	Spearman	-.447	.143	.055
FRI	Somers' d	-.500	.175	.008
	Kendall's tau-b	-.382	.136	.008
	Gamma	-.500	.175	.008
	Spearman	-.484	.158	.036

In the next few pages, Figures 25 – 30 depict the relationships between the variables in Table 16, beginning with a comparison of educational level to aggregate LEA scores.

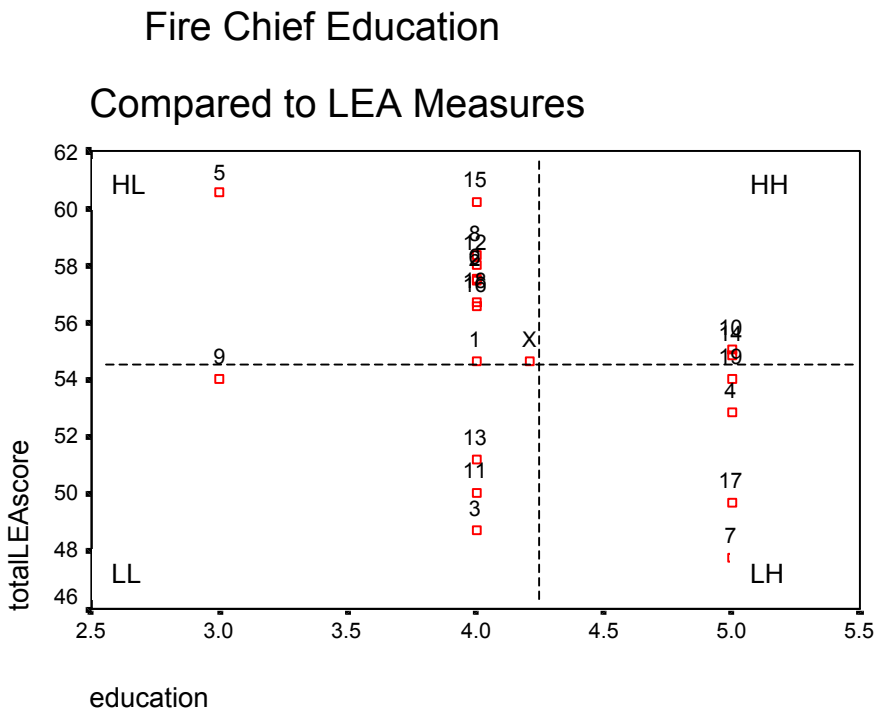


Fig. 25. Ratings of Total LEA Score Compared to Fire Chief Education

Figure 25 identifies a negative significant relationship between fire chief's level of education and the aggregate mean LEA score in all behavior factors ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Total LEA score is 54.66 with a standard deviation of 3.79.

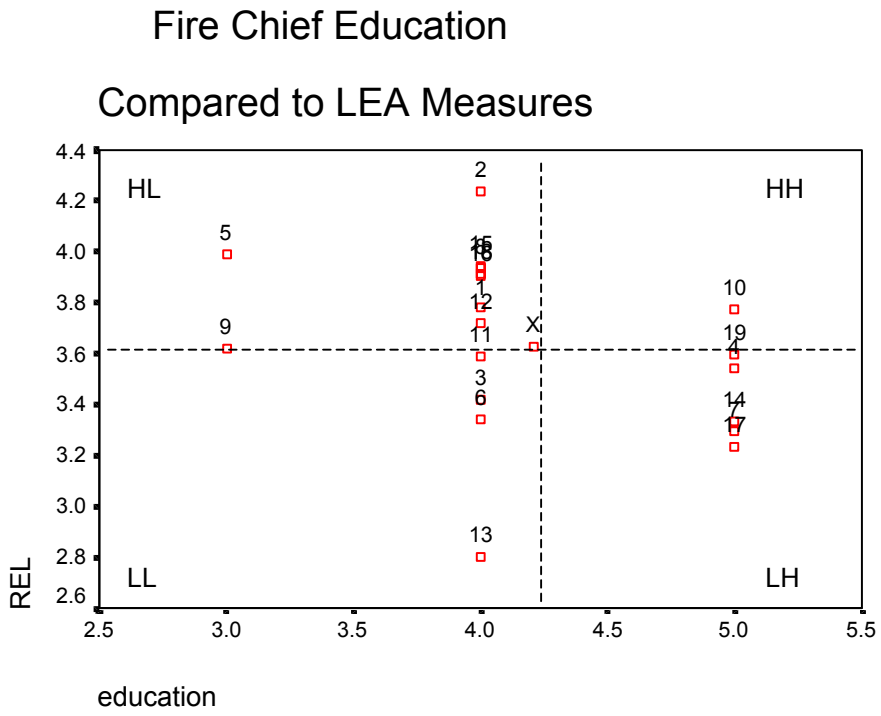


Fig. 26. Ratings of Relationship Behavior Compared to Fire Chief Education

Figure 26 identifies a negative significant relationship between fire chief level of education and the LEA composite factor Relationship Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Relationship Behavior is 3.63 with a standard deviation of 0.34.

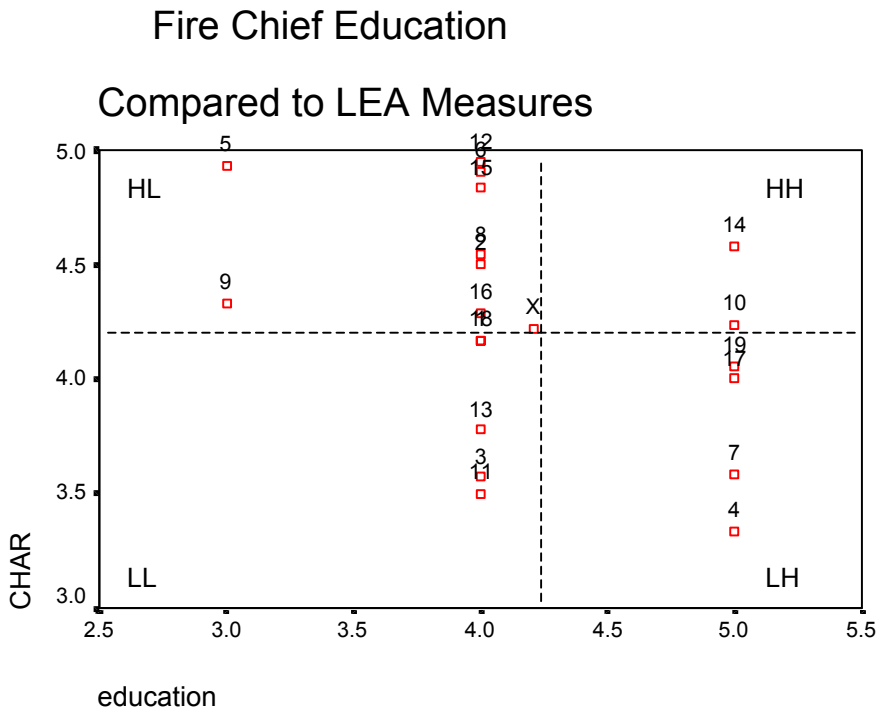


Fig. 27. Ratings of Character Compared to Fire Chief Education

Figure 27 identifies a negative significant relationship between fire chief level of education and the LEA factor Character ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Character is 4.22 with a standard deviation of 0.51.

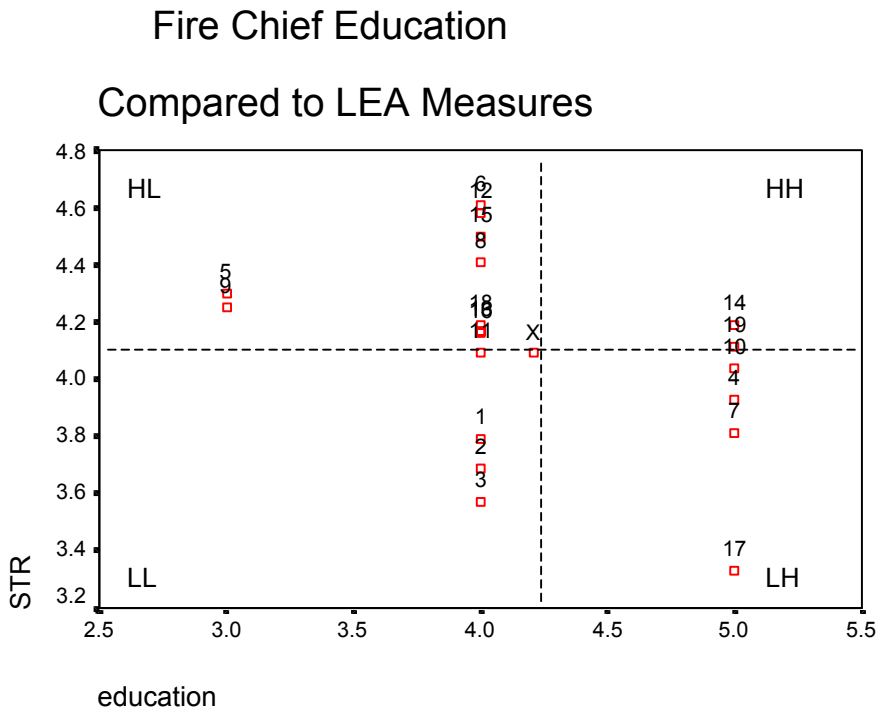


Fig. 28. Ratings of Straightforwardness Behavior Compared to Fire Chief Education

Figure 28 identifies a negative significant relationship between fire chief level of education and the LEA factor Straightforwardness ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Straightforwardness is 4.09 with a standard deviation of 0.34.

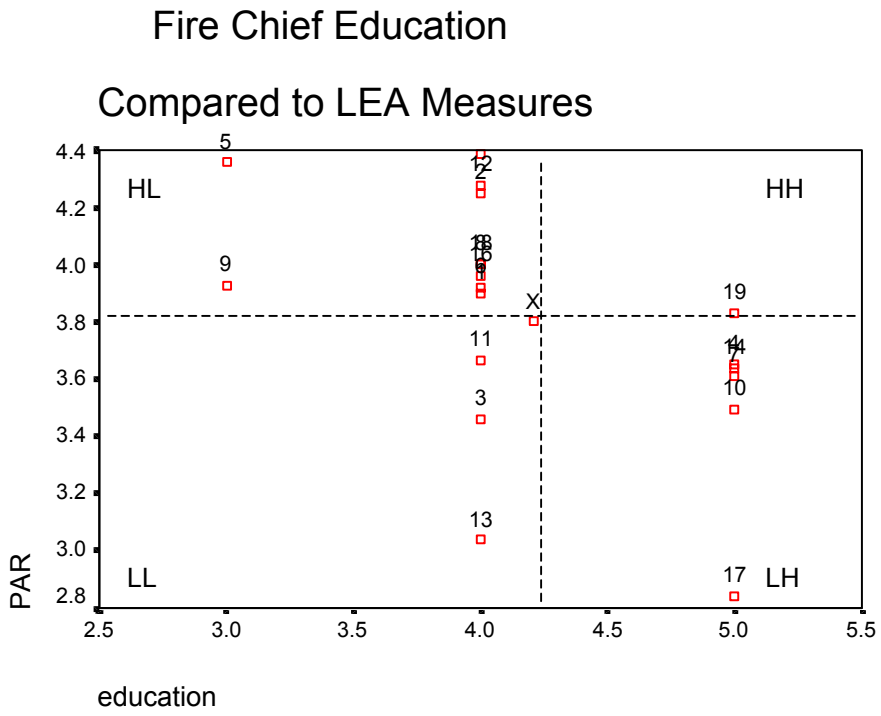


Fig. 29. Ratings of Partner Behavior Compared to Fire Chief Education

Figure 29 identifies a negative significant relationship between fire chief level of education and the LEA factor Partner behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Partner is 3.80 with a standard deviation of 0.41.

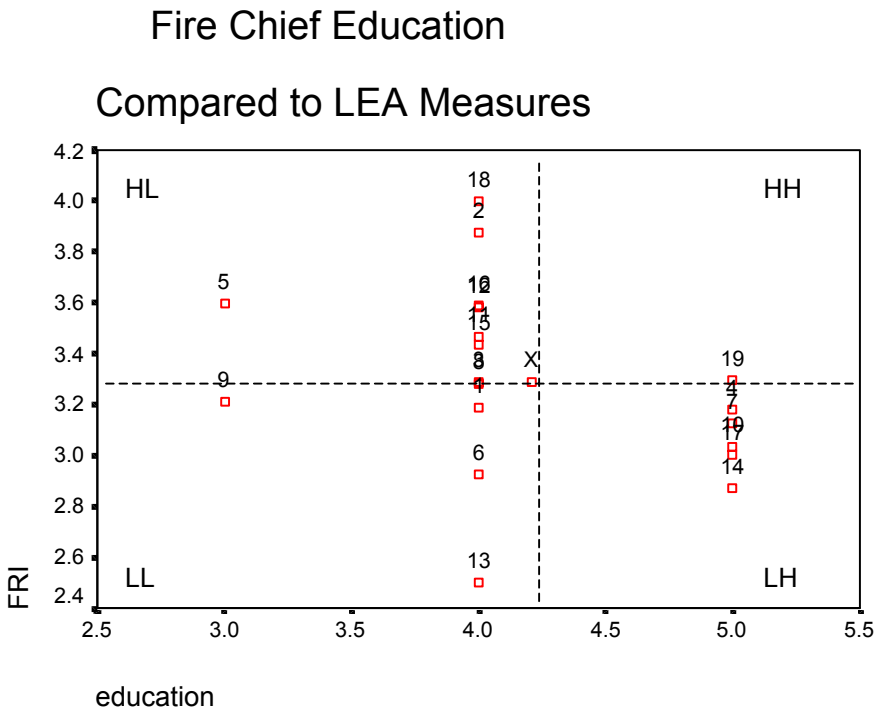


Fig. 30. Ratings of Friend Behavior Compared to Fire Chief Education

Figure 30 identifies a negative significant relationship between fire chief level of education and the LEA factor Friend Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Friend is 3.29 with a standard deviation of 0.36.

Summary

The results to support Question 2 have been presented by testing P_1, H_1, and H_2 and providing quantitative data identifying significant relationships between a number of LEA factors and measures of fire chief characteristics. These findings showed a positive relationship between numerous LEA factors and the subordinates' perception of their leaders ability to "get the

most productivity" from them. This set of data was derived from within items on the LEA, as reported by the subordinates, and provides important insights on leader behavior characteristics that can lead to improved effectiveness in the workplace.

When comparing leader characteristics including tenure and educational levels, the data identified negative relationships with the LEA factors. Longer time on the job as chief and higher levels of education were related with lower scores in many areas of the leadership behavior areas. Possible explanations for this finding will be discussed in Chapter V.

Research Question 3. "What are the relationships between fire chief's leadership effectiveness and measures of organizational productivity?"

Question 3 is examined by comparing aggregate and individual LEA factors to proposed measures of organizational productivity. H_3 is tested by comparing LEA factors to the amount of budget dollars spent per capita in a community. This organizational input measure was chosen to see if a relationship existed between a fire chief's leadership effectiveness ratings and his/her ability to secure financial resources for the department.

For this hypothesis, operational budgets for each participating department for FY 20001 were obtained and per capita spending was calculated. This is a performance measure included in the ICMA Comparative measurement studies, however the data is most recently

presented in a format, which limits it use. Therefore, this researcher obtained the budget amounts directly from the participant agencies.

Budget dollars per capita spent were found to be positively related with Relationship Behavior, Enjoyableness, Friend Behavior, and Organizational Outreach Behavior. Dependable Behavior was found to have a negative relationship with budget dollars per capita spent.

Hypothesis $_4$ is tested by examining the relationship between LEA factors and a performance measure also reported in the ICMA studies. The annual number of residential structure fires per 1,000 population served was the measure selected. Included in the category of residential structure fires is the actual number of fires reported by the agency through the National Fire Incident Reporting System (NFIRS) or the California Fire Incident reporting System (CFIRS), including those fires which were out on arrival. Occupancies included in this category are all single-family dwellings and multiple family occupancies, i.e. duplexes, quad-plexes, and apartments.

This performance measure can be considered an activity, intermediate measure, or outcome measure, depending on the set of programs or division of the fire department under consideration. For example, the Suppression Division of a department would likely view the “number of fires responded to” as an activity rather than an outcome; and, keeping the fire to the room of origin, number of acres burned, property dollar loss figures, and lives saved as outcome measures.

The Fire Prevention Bureau may consider this measure an intermediate outcome resulting from public education interventions or building and fire code regulations. For the fire chief, this measure is an intermediate outcome; one, which firefighters and fire managers alike attempt to reduce. A more tangible performance measurement for fire departments involved in structural firefighting and also included in the ICMA study is the "number of one and two-family residential structure fire incidents confined to the room of origin." However, this statistic was reported by only five of the participating departments in the most recent ICMA study. This measurement more accurately captures a gauge of effectiveness at the fire suppression level, but accurate data remains scarce for larger studies.

Testing of Hypothesis $_4$ identified significant relationships between the rate of fire per 1,000 population served and the LEA factors of Followership and Dependable. Less significant relationships were found with the LEA factors including Mission oriented Behavior, Friend Behavior, and Industriousness. All but the Friend Behavior factor was found to have a positive relationship with the rate of fire; meaning that higher scores in MOB, IND, FOL, and DEP were associated with higher rates of residential structures per 1,000 population served. The possible explanations for this relationship will be discussed in Chapter V.

Hypothesis $_3$- There is a relationship between a fire chief's leadership effectiveness measures and the organization's input resource of budget dollars spent per capita.

As mentioned above Hypothesis $_3$ is a comparison of an input resource to LEA factors. The leadership factor Dependable Behavior had a significant negative relationship ($P<.050$). Relationship, Enjoyableness, and Organizational Outreach were found to have a significant positive relationship. Friend Behavior was a lessor, yet noticeable positive relationship ($P>.050$). The comparison of these variables, not unlike the others in this study is susceptible to the influence of heavily weighted individual data points because of the small number of participants. Table 17 identifies the leader's aggregate LEA score compared to the budget dollars per capita spent in their city.

Table 17.
Budget spending per capita and LEA score by rank order

Leader Subcode	Total LEA Score	Budget dollars per capita
5	60.524	$96
15	60.219	$86
8	58.376	$137
12	58.046	$81
6	57.52	$89
2	57.492	$109
18	56.745	$240
16	56.577	$404
10	55.079	$135
14	54.846	$85
1	54.672	$97
9	54.055	$141
19	54.037	$75
4	52.901	$93
13	51.241	$85
11	50.039	$100
17	49.698	$131
3	48.726	$132
7	47.804	$53
median	54.85	$98.50
mean	54.66	$127.44
std.dev.	3.79	$79.78

The results of the statistical tests between the LEA factors showing relationships with budget dollars spent are presented in Table 18. This table shows the comparatively weak relationships between these variables.

Table 18.
H_3 Statistical relationships showing the association between budget dollars spent per capita and select LEA measures.

		Budget dollars spent per capita		
LEA Factor	**Method**	**Value**	**Std. Error**	**P-Value**
REL	Somers' d	.294	.122	.015
	Kendall's tau-b	.293	.121	.015
	Gamma	.294	.122	.015
	Spearman	.403	.174	.087
JOY	Somers' d	.270	.115	.019
	Kendall's tau-b	.270	.115	.019
	Gamma	.271	.116	.019
	Spearman	.417	.161	.076
OUT	Somers' d	.347	.121	.004
	Kendall's tau-b	.347	.121	.004
	Gamma	.349	.122	.004
	Spearman	.516	.167	.024
DEP	Somers' d	-.302	.158	.057
	Kendall's tau-b	-.301	.158	.057
	Gamma	-.302	.212	.057
	Spearman	-.419	.117	.066
FRI	Somers' d	.217	.156	.162
	Kendall's tau-b	.216	.155	.162
	Gamma	.217	.156	.162
	Spearman	.291	.217	.213

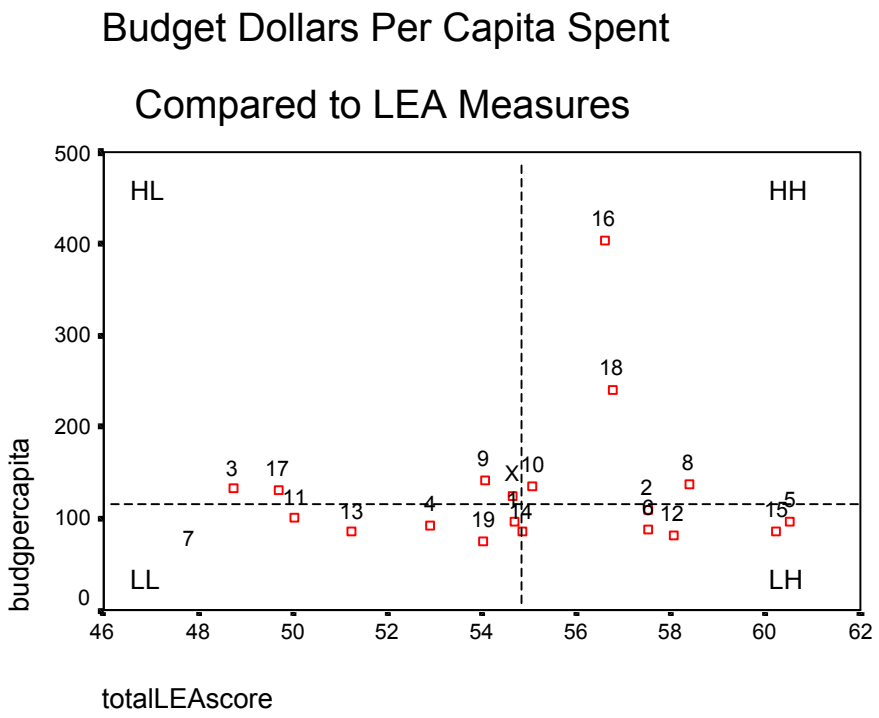


Fig. 31. Budget Dollars Per Capita Spent Compared to Total LEA Score

Figure 31 identifies broadly dispersed data with two noticeable outliers combining to signify no significant relationship between budget dollars per capita spent and the aggregate mean LEA score in all behavior factors (*P*= .775). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Total LEA score is 54.66 with a standard deviation of 3.79. The mean for the variable budget dollars per capita spent is $127.44 with a standard deviation of $79.78.

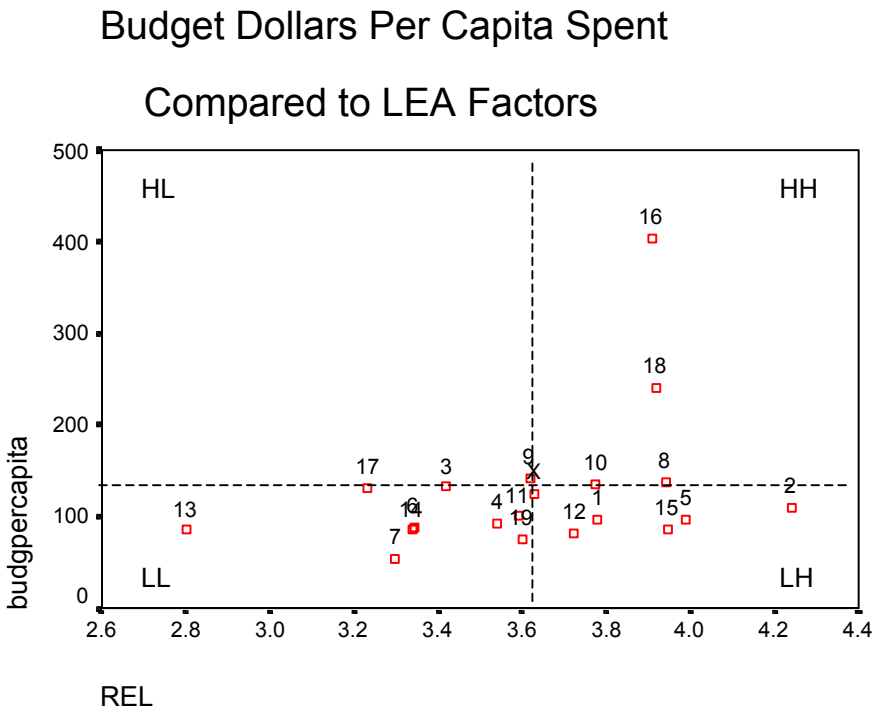


Fig. 32. Budget Dollars Per Capita Spent Compared to Relationship Behavior

Figure 32 identifies a weak, but positive significant relationship between budget dollars per capita spent and the composite LEA factor Relationship Behavior (*P*< .050). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Relationship Behavior is 3.63 with a standard deviation of 0.34. The mean for the variable budget dollars per capita spent is $127.44 with a standard deviation of $79.78.

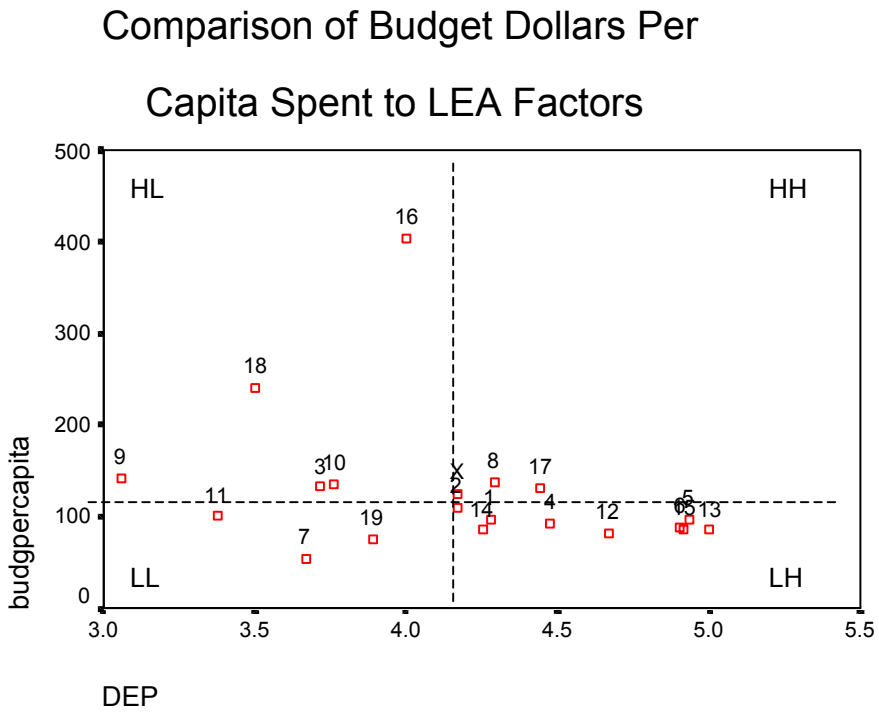


Fig. 33. Budget Dollars Per Capita Spent Compared to Dependable Behavior

Figure 33 identifies a weak, but noticeable negative relationship between budget dollars per capita spent and the LEA factor Relationship Behavior (*P*=.057). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Dependable Behavior is 4.17 with a standard deviation of 0.57. The mean for the variable budget dollars per capita spent is $127.44 with a standard deviation of $79.78.

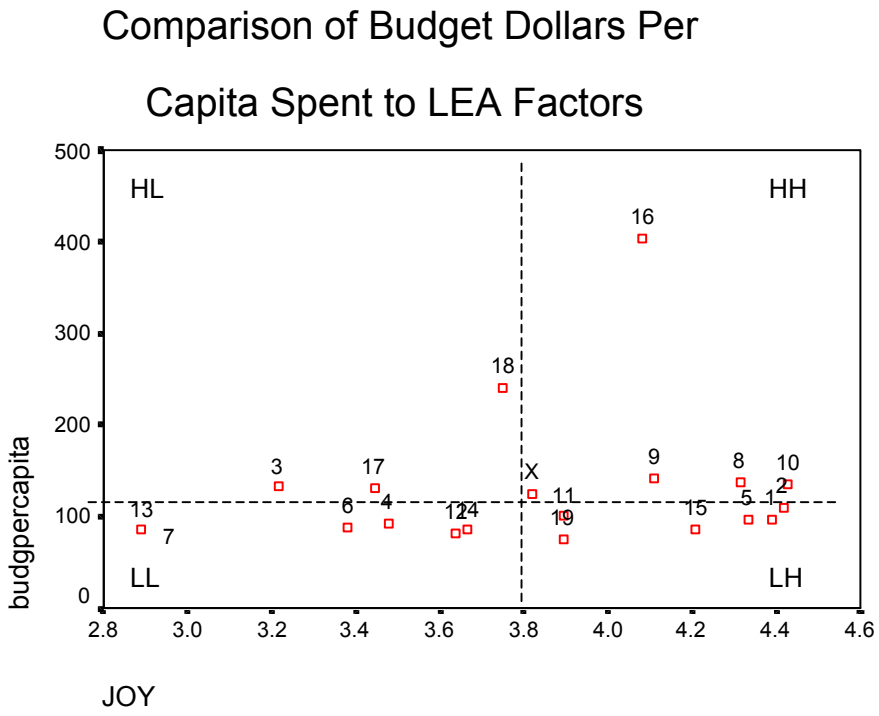


Fig. 34. Budget Dollars Per Capita Spent Compared to Enjoyable Behavior

Figure 34 identifies a weak, but positive significant relationship between budget dollars per capita spent and the LEA factor Enjoyable Behavior ($P < .050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Enjoyable Behavior is 3.82 with a standard deviation of 0.49. The mean for the variable budget dollars per capita spent is $127.44 with a standard deviation of $79.78.

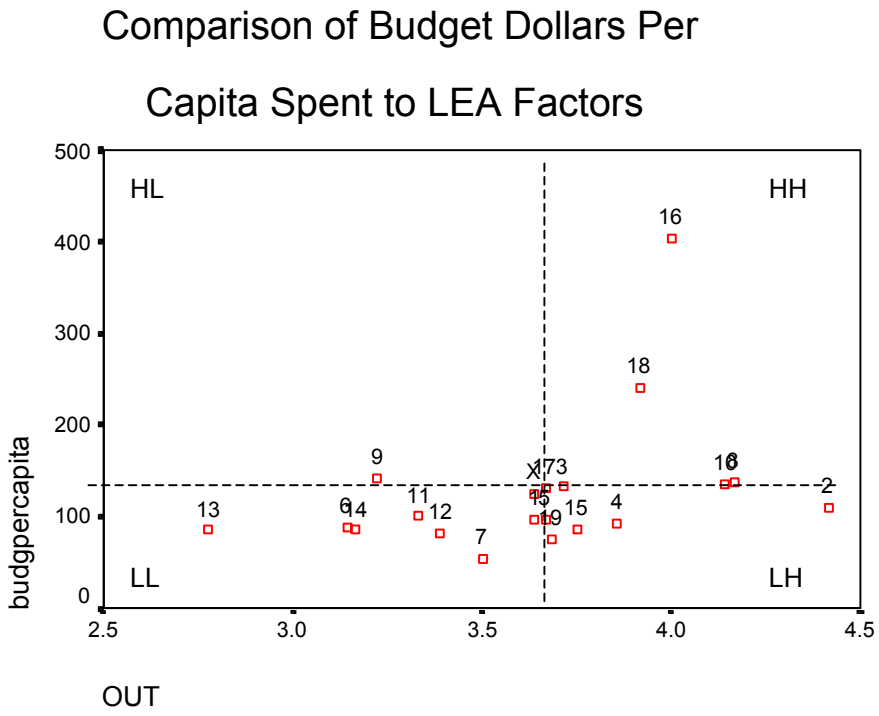


Fig. 35. Budget Dollars Per Capita Spent Compared to Organizational Outreach Behavior

Figure 35 identifies a weak, but positive significant relationship between budget dollars per capita spent and the LEA factor Organizational Outreach Behavior ($P < .050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Organizational Outreach Behavior is 3.64 with a standard deviation of 0.41. The mean for the variable budget dollars per capita spent is $127.44 with a standard deviation of $79.78.

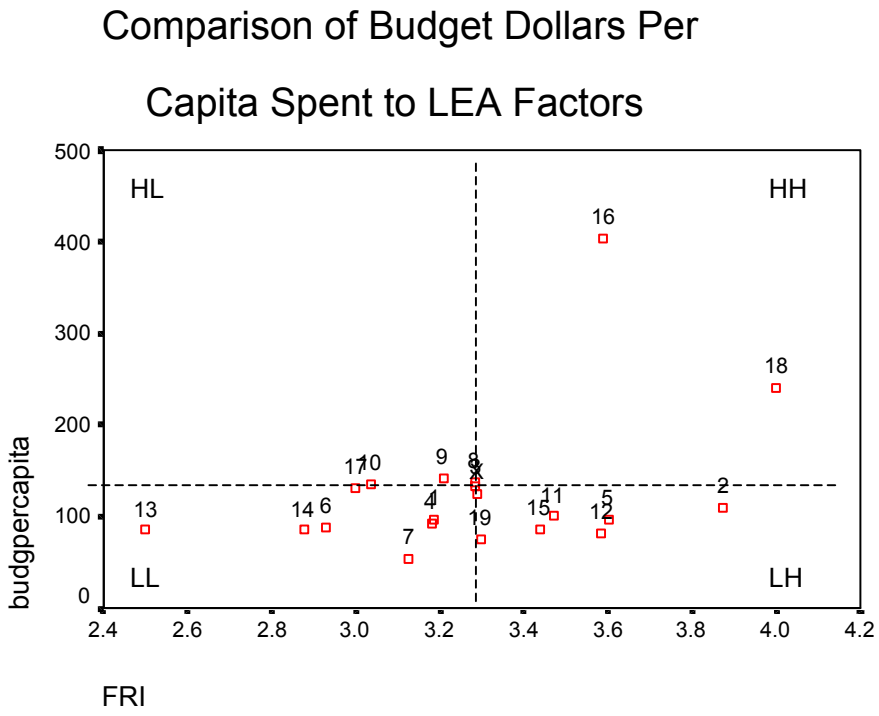


Fig. 36. Budget Dollars Per Capita Spent Compared to Friend Behavior

Figure 36 identifies a weak, but noticeable positive relationship between budget dollars per capita spent and the LEA factor Friend Behavior (*P*=.162). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Friend Behavior is 3.29 with a standard deviation of 0.36. The mean for the variable budget dollars per capita spent is $127.44 with a standard deviation of $79.78.

Hypothesis $_4$ – There is a relationship between a fire chief's leadership effectiveness measures and the organization's intermediate outcome performance measurement of residential structure fires per 1,000 population served.

Table 19 identifies the fire chief's LEA aggregate score compared to their department's reported number of residential structure fire per 1,000 population served in their community. This intermediate outcome performance measurement is one which many fire departments continually attempt to reduce, however the fire rate in a community is affected by many factors, including the occupancy mix, age of building stock, economic and social demographics, population density, and age and application of the building and fire codes.

Table 19.
Residential structure fires per 1,000 pop. served and LEA score by rank order

Leader Subcode	Total LEA Score	Number of residential fires per 1,000 pop. Served
5	60.524	1.94
15	60.219	0.57
8	58.376	0.52
12	58.046	0.78
6	57.52	1.52
2	57.492	0.7
16	56.75	1.41
18	56.745	0.44
14	54.846	0.69
1	54.672	0.69
9	54.055	0.6
4	52.901	0.7
13	51.241	1.74
11	50.039	0.37
7	47.804	0.56
median	56.745	0.69
mean	55.415	0.882
std.dev.	3.688	0.504

The results of the crosstabulation tests between the variable residential structure fires per 1,000 population served and the related LEA factors are identified in Table 20. Dependable Behavior and Follower Behavior are the two LEA factors with significant relationships. The other three leadership factors, although not meeting the significance threshold of $P < .050$, do represent variables with tendencies toward a significance relationship. As mentioned earlier, the small sample set, combined with a standard deviation of 0.504, allow the statistical significance to be dramatically influenced by single data points.

Table 20.
H_4 statistical relationships showing the association between residential structure fires per 1,000 population served and select LEA measures.

	Residential structure fires per 1,000 pop. served			
LEA Factor	**Method**	**Value**	**Std. Error**	**P-Value**
MOB	Somers' d	.322	.174	.065
	Kendall's tau-b	.319	.173	.065
	Gamma	.322	.174	.065
	Spearman	.434	.219	.093
DEP	Somers' d	.533	.151	.000
	Kendall's tau-b	.538	.151	.000
	Gamma	.542	.152	.000
	Spearman	.668	.170	.004
FOL	Somers' d	.300	.109	.008
	Kendall's tau-b	.308	.110	.006
	Gamma	.305	.110	.006
	Spearman	.452	.172	.079
IND	Somers' d	.297	.167	.076
	Kendall's tau-b	.295	.166	.076
	Gamma	.299	.169	.076
	Spearman	.427	.217	.099
FRI	Somers' d	-.271	.209	.196
	Kendall's tau-b	-.269	.208	.196
	Gamma	-.271	.209	.196
	Spearman	-.292	.277	.273

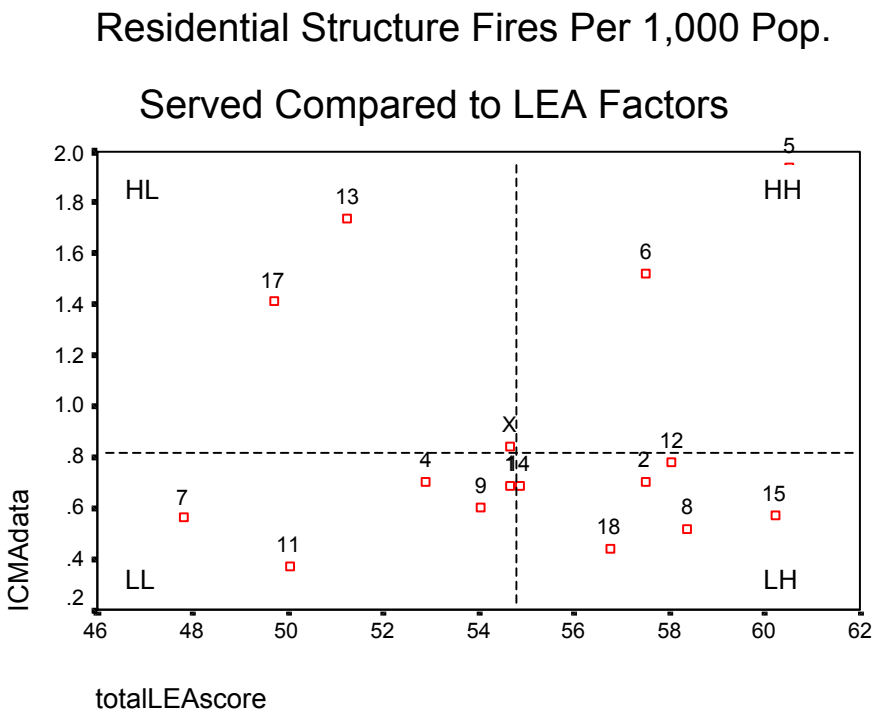


Fig. 37. Residential Structure Fires per 1,000 Population Served Compared to Total LEA Score

Figure 37 identifies broadly dispersed data with three noticeable outliers combining to signify no significant relationship between residential structure fires per 1,000 population served and the aggregate mean LEA score in all behavior factors (*P*=.669). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Total LEA score is 54.66 with a standard deviation of 3.79. The mean for the variable residential structure fires per 1,000 population served is 0.88 with a standard deviation of 0.50.

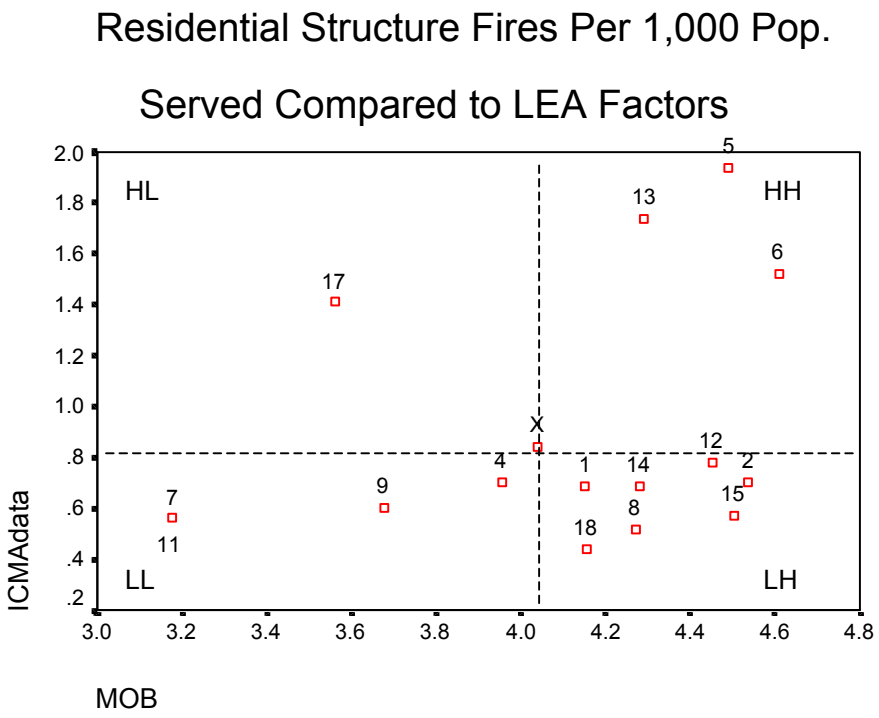


Fig. 38. Residential Structure Fires per 1,000 Population Served Compared to Mission Oriented Behavior

Figure 38 identifies a weak, but noticeable positive relationship between the variable residential structure fires per 1,000 population served and the composite LEA factor Mission Oriented Behavior (*P*=.065). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Mission Oriented Behavior is 4.05 with a standard deviation of 0.44. The mean for the variable residential structure fires per 1,000 population served is 0.88 with a standard deviation of 0.50.

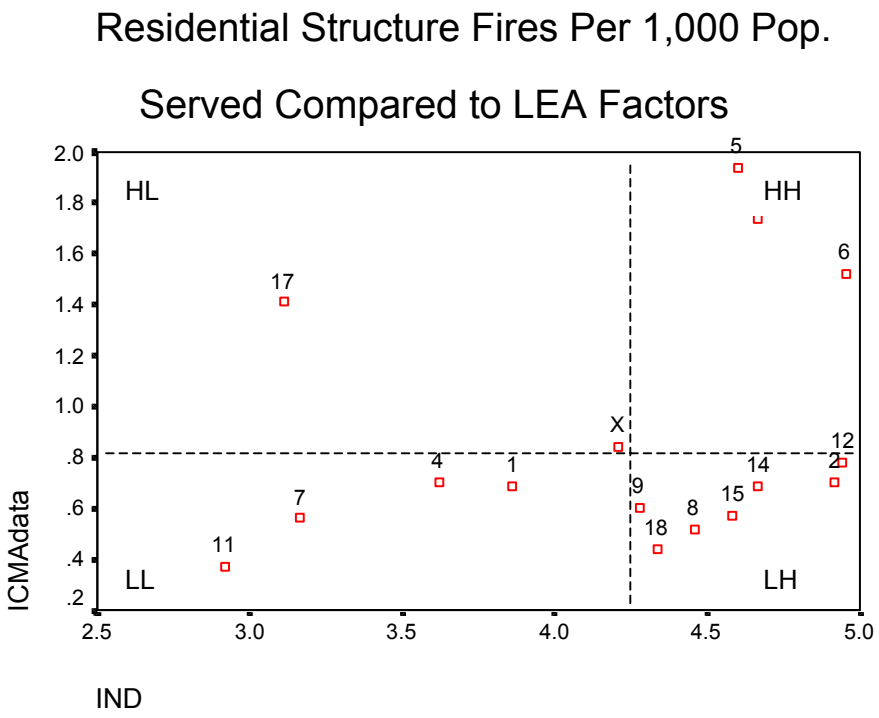


Fig. 39. Residential Structure Fires per 1,000 Population Served Compared to Industrious Behavior

Figure 39 identifies a weak, but noticeable positive relationship between the variable residential structure fires per 1,000 population served and the LEA factor Industrious Behavior (*P*=.076). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Industrious Behavior is 4.21 with a standard deviation of 0.64. The mean for the variable residential structure fires per 1,000 population served is 0.88 with a standard deviation of 0.50.

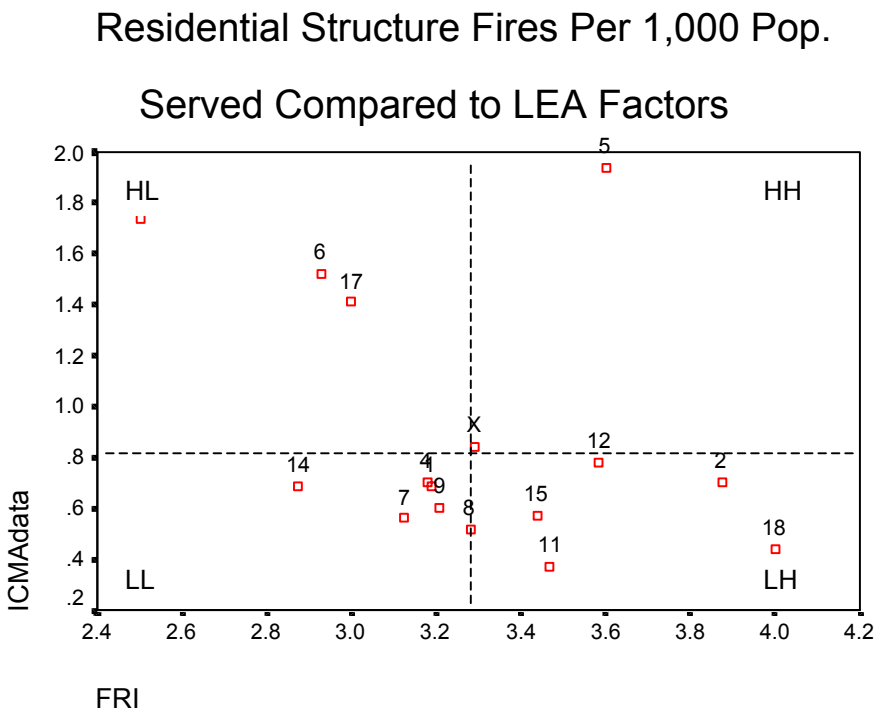


Fig. 40. Residential Structure Fires per 1,000 Population Served Compared to Friend Behavior

Figure 40 identifies a weak, but noticeable negative relationship between the variable residential structure fires per 1,000 population served and the LEA factor friend Behavior (*P*=.196). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Friend Behavior is 3.29 with a standard deviation of 0.36. The mean for the variable residential structure fires per 1,000 population served is 0.88 with a standard deviation of 0.50.

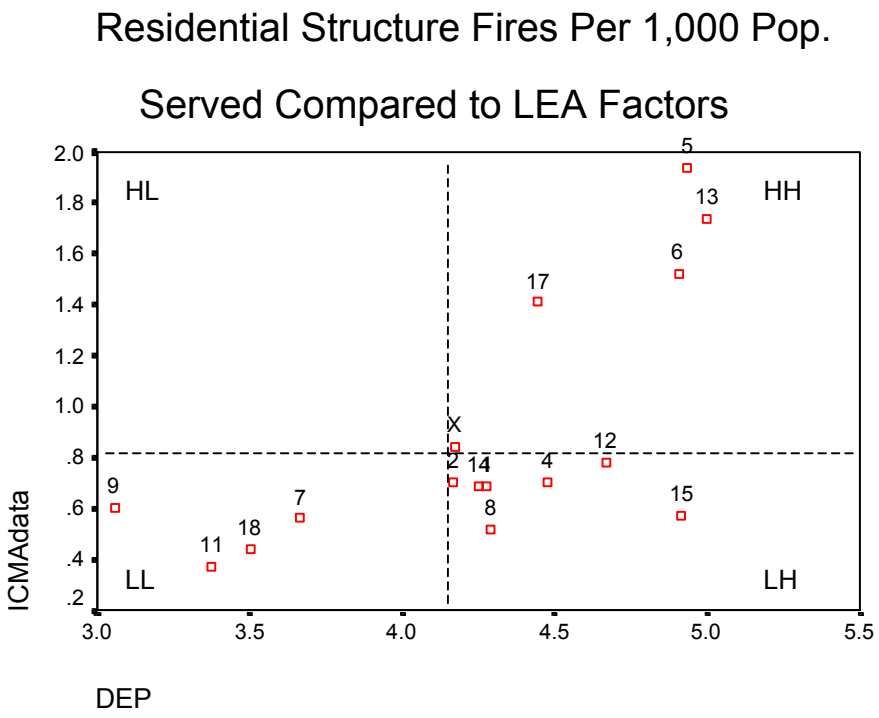


Fig. 41. Residential Structure Fires per 1,000 Population Served Compared to Dependable Behavior

Figure 41 identifies a significant positive relationship between the variable residential structure fires per 1,000 population served and the LEA factor Dependable Behavior ($P<.000$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Dependable Behavior is 4.17 with a standard deviation of 0.57. The mean for the variable residential structure fires per 1,000 population served is 0.88 with a standard deviation of 0.50.

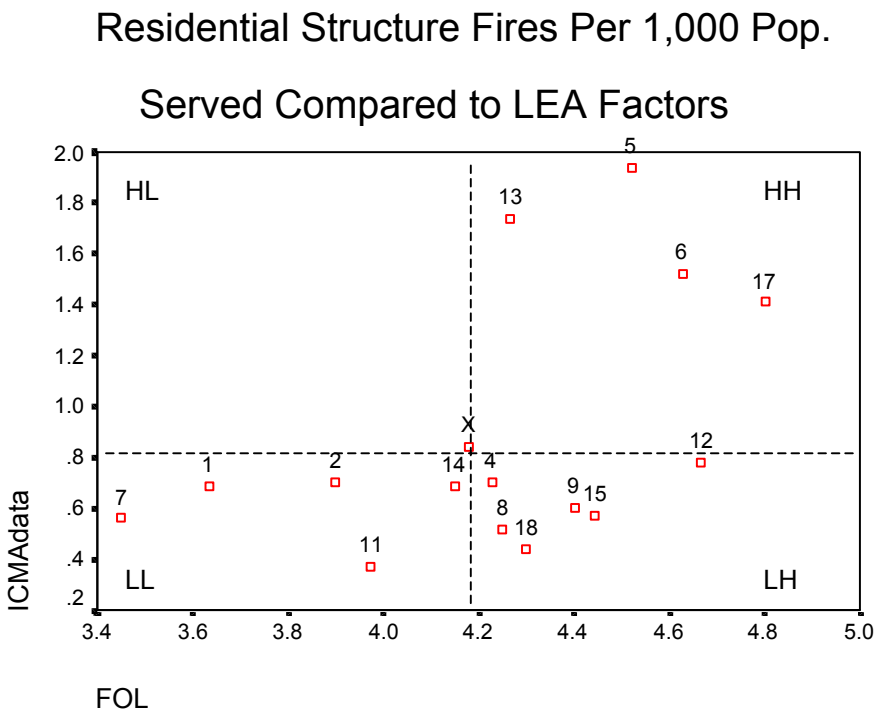


Fig. 42. Residential Structure Fires per 1,000 Population Served Compared to Followership Behavior

Figure 42 identifies a significant positive relationship between the variable residential structure fires per 1,000 population served and the LEA factor Followership Behavior ($P<.050$). The figure also illustrates the dispersion of data points across High/High, High/Low, Low/High, and Low/Low quadrants. The mean for the variable Followership Behavior is 4.18 with a standard deviation of 0.37. The mean for the variable residential structure fires per 1,000 population served is 0.88 with a standard deviation of 0.50.

Summary

This final section of findings identifies statistical associations between leadership behaviors and indicators of organizational productivity, using the proxy set of variables provided through the LEA. Research Question three has been answered by testing H_3 and H_4. The results of these tests show significant relationships between several LEA subfactors and the proxy measures of organizational productivity, budget spending per capita and the rate of fire in residential structures. A conspicuous and yet, disturbing finding is the positive relationship between four out of five LEA factors and the rate of residential structure fires. Chapter V discusses the possible reasons for this finding and their implications for leadership and the fire service.

CHAPTER V

SUMMARY AND DISCUSSION

The purposes of this study are to determine what fire chiefs from selected departments across California identify as the leading problems they face; relay the measures of effectiveness these chiefs value as significant; and categorize the collective advice of nearly 100 senior active fire officers on what a fire chief assuming command of a department should do to become a more effective chief. Then, this research examines the relationships between fire chief characteristics and the leadership dimensions of mission accomplishment, empowerment, relationship, team building, and personal character. (Gilbert, Hannan, and Flaggert, 2000). Finally, this work tests fire chiefs' effectiveness scores compared to measures of organizational productivity.

The following questions guide this research.

1. What areas of fire department administration capture the attention of today's fire chiefs?
2. What are the relationships between fire chief characteristics and their perceived leadership effectiveness, as viewed by their followers?
3. What are the relationships between fire chief's leadership effectiveness and measures of organizational productivity?

This study uses descriptive and correlational research methods. Data were collected by using 13 site visits and meeting with department fire chiefs

and their senior staff. Nineteen departments submitted a Leadership Effectiveness Assessment (LEA) yielding 138 respondents. The LEA evaluated the chiefs in five main leadership behaviors and 12 subcategories using subordinate ratings. The survey results were tested using crosstabulation statistics to determine relationships between LEA behavior factors, ratings of subordinate productivity and select leader characteristics. LEA factors were also tested against the department's per capita spending and the rate of fire in the community to identify significant relationships.

By examining the interview data using a five frames leadership taxonomy (Human Resource, Symbolic, Structural, Political, and Performance) five areas for leadership improvement and activity surfaced. These areas include leader self-development, leadership approach, department member development, organizational development, and the department's role in the community. These areas seem to arise naturally out of the theoretical bases provided in Leader/Member Exchange theory, Transactional Leadership theory, and Transformational Leadership theory; their common element being the presence of effective and mutually satisfying relationships, which achieve common goals.

Statement of the Problem

For the past twenty-five years, many local agencies have faced limited budgetary growth which has required innovative measures in funding service delivery. For local government service providers, fire department revenues

are generated primarily from sales taxes or real property taxes. Since the 1976 passage of the Jarvis-Gann tax initiative, known as Proposition 13, property tax revenues in California have been limited by state law; they increase at the rate of inflation or a maximum of 2% per year (Chapman, 1998). This limited resource stream has forced local government service providers to search for ways to maintain service effectiveness and efficiency under strong societal pressures toward economic efficiency and cost containment (Kirlin, 1982; Chapman, 1998; Poister and Streib, 1999). However, maintaining the status quo in service delivery is not an acceptable alternative in a society where people expect ever-quicker responses and consistent or increasingly higher quality services (ICMA, 1993). Public organizations, now more than ever, must be concerned with effective leadership and improved performance.

Until the 1970's, the fire service in the United States was primarily charged with the control of fires in America's cities, rural communities, and forests. In addition, civilian rescues from buildings and entrapments using rudimentary tools were considered part of the fire department's duty. Following the Viet Nam War, fire departments began providing emergency medical services using field treatment methods tried by the military. Emergency Medical Services (EMS) has since grown in scope and volume to include paramedic level of treatment on fifty to eighty percent of the call volume for most fire departments in the state.

Other service areas have become standard fare for many fire jurisdictions. These added responsibilities include: auto extrication, hazardous materials mitigation, weapons of mass destruction preparedness and response, aircraft rescue and firefighting, technical rescue, medical transport, and water rescue. With each new discipline or service area, firefighters are required to obtain and maintain new skill sets, and fire departments must purchase new equipment and apparatus. Additionally, some new service areas require changes in organizational structures and new managerial requirements.

Competition from the private sector and other public agencies, combined with demands from the citizenry for higher levels of performance and greater economy are pushing many organizations to their perceived limits (Osborne and Gaebler, 1992; Osborne and Plastrik, 1997). Organizations that have learned to cope with changes in their environment and are willing to adapt by altering the organization's culture, by redefining service delivery expectations and eliminating waste can survive such threats. The three "E's" remain applicable to today's organizations: effectiveness, efficiency, and economy.

The fire service is not exempt from these pressures and will increasingly rely on its senior executive officers to provide exemplary leadership. Difficult choices lie ahead for California's fire service leaders. These new challenges require fire leaders to move outside their own field and be proficient in concepts of regionalization, intergovernmental relations,

marketing, management information systems, and to maintain not just state, but national and international networks.

Furthermore, this Dissertation is set in a time in the history of the United States fire service when homeland security is threatened. Members of every local fire department in America have witnessed 343 of their fellow firefighters give the supreme sacrifice in efforts to rescue the public. If the importance of the role of fire service leaders was in some way diminished or considered less than a top priority before September 11, 2001, let it never be so again.

Summary of the Results

The results of this study support leadership theory emphasizing the importance of leader/follower relationship building and recognizes reciprocal influence between bosses and their subordinates. The field interviews identified numerous statements that call for behaviors and leadership action which focus on the inclusion, development, and well-being of followers. Specific leadership behaviors were also identified which have significant relationships between leadership effectiveness scores and follower productivity ratings.

What was found by interviewing the fire chiefs and their staffs was significant support for a human relations approach to organizational leadership. Bolman and Deal state that the symbolic and political frames "tended to be the primary determinants of effectiveness as a leader" (1997; 278). However, it has been demonstrated in this study that when the

participants were giving advice for new fire chiefs, the largest number of responses was in the human resources frame (43%). Also, when asked about their department's leadership and programmatic areas, the chiefs most frequently cited subject matter under the human resource frame (29%) as areas for which they were most proud . Interestingly, there were far fewer human resource challenges relayed by the participants compared to problematic areas in the structural, political, or performance frames.

Table 20 uses the four frames offered by Bolman and Deal, plus an added fifth frame, performance. These five analytical lenses allow one to examine leadership from unique, yet related perspectives, and they also work well as a taxonomy for leadership strategies. This study developed five categories for leadership strategies which evolved out of the interview data analysis. These categories are used to list comments and suggest actions for more effective leadership. These five categories include Leader Self-development, Leadership Approach, Member Development, Department Organizational Development, and the Department's Role in the Community.

Using this method to examine the interview results, this study suggests leaders take a critical look at one's own knowledge, skills, and competencies; then examine how those gifts are used in leadership action. Next, move outwardly in spheres of leadership influence to direct reports, department membership, the organization, and finally, areas of leadership influence between the department and the community. The elements of this concept can be seen in Table 20.

-

-

-

The comments and suggestions provided in Table 20 reflect both contemporary leadership and management thought. This table also includes insights that are particular to leadership in a unionized organization, public leadership, and leadership in today's fire service. Taken together, this set of responses capture the areas of fire administration that fire chiefs in this sample of participants deem important and consuming of their time.

In this study, the researcher wanted to determine if any relationships existed between select fire chief characteristics and their level of effectiveness, as perceived by their followers. First, ratings of the subordinates' perceptions of their productivity were compared to all the LEA factors. It was found that nine of the seventeen LEA factors were significantly related, each having a positive relationship ($P < 0.05$; Somers'd, Kendall's tau-b, Gamma, and Spearman statistical measures were used). These factors include the composite LEA factors of Team Building Behaviors, Mission Oriented Behaviors, Relationship Behaviors, and the subfactors of Character, Forcefulness, Industriousness, Authoritative, Partner, and Straightforwardness.

Next, two fire chief characteristics, tenure and education, were tested to determine if any relationship existed with any LEA factors. The sample of fire chiefs contained one with less than a year, ten with one to four years, six with five to nine years, and two with 15-19 years (N=19). When examining tenure, these tests revealed significant relationships with Empowerment Behaviors, Calming Influence, and Friend. Tenure was negatively related to

all three of these LEA factors. That is, fire chief scores in these leadership factors generally declined with tenure until the 5-9 year mark. Then, both Empowerment and Calming Influence Behaviors began to rise, while Friend Behaviors declined in ratings more steeply.

The second fire chief characteristic to be examined against LEA factors, education, identified significant negative relationships with Relationship Behaviors, Character, Straightforwardness, Partner, and Friend ($P< 0.05$; Somers'd, Kendall's tau-b, Gamma, and Spearman statistical measures were used). There were two fire chiefs with one to three years of college, eleven with college degrees, and six with advanced degrees (N=19).

To determine if relationships between fire chief leadership effectiveness and organizational productivity existed, aggregate LEA scores for the chiefs were compared to two organizational productivity measures. Budget dollars spent per capita was chosen as an input measure fire chiefs should have influence over, at least to some degree. Again, using crosstabulation statistical techniques, Relationship Behaviors, Enjoyableness, Organizational Outreach, Dependability, and Friend factors were found to have significant associations ($P< 0.05$). Of these five factors, Dependability, and Friend had weak, but negative associations.

The second organizational productivity measure used is an intermediate outcome, residential structure fires per 1,000 population served. This intermediate outcome performance measure is one which many fire departments continually attempt to reduce, however the fire rate in a

community is affected by many factors, including the occupancy mix, age of building stock, economic and social demographics, population density, building age, and local application of the building and fire codes.

Taken as the rate of fire in a community, this outcome measure was found to be significantly related to Dependability and Followership ($P < 0.01$). Three other factors showed weaker, yet noticeable associations; Mission Oriented Behaviors ($P = 0.065$), Industriousness ($P < 0.076$), and Friend ($P < 0.196$). With the exception of Friend, the other four LEA factors had positive associations with residential structure fires per 1,000 population served; meaning, when leader scores in these areas increase, so does the rate of fire in the community. This is not a finding that seems to correspond with notions of effective leadership practices having a positive outcome on the core mission of a fire department. However, it does cause one to question the results and speculate on why; or it could represent a spurious relationship between variables.

Implication of the Results

There are five areas arising out of this work that contribute to a greater understanding of leadership and public administration practice. These contributions provide support for a human relations theory of leadership, extend the analysis and application of leadership study, and aid in the practice of leadership in public organizations, particularly as executive leaders in California's Fire Service. These five areas include:

1. Support for a human relations approach to leadership in the tradition of Rensis Likert's (1976) understanding of a reciprocal system of influence between *associates* in an organization.
2. Addition of the Performance Frame to Bolman and Deal's (1997) analytic leadership frames.
3. Development of a method to examine and operationalize leadership strategies through a five frame matrix which includes Leader Self-development, Leadership Approach, Member Development, Department Organizational Development, and the Department's Role in the Community.
4. Sense making of specific findings on fire chief characteristics and leadership effectiveness.
5. Sense making of specific findings of fire chief leader effectiveness scores and measures of organizational productivity.

These developments will be discussed in the sections below.

Contribution to Leadership Theory

Each of the three leadership theories used to draw upon in this Dissertation have at their core three common factors. First, each theory recognizes and incorporates the satisfaction of the motivational needs of the subordinate. Second, the attainment of common goals for the organization is considered a primary outcome. Finally, each of the theories is centered around an evolving relationship between the leader and the follower.

Follett (1925), Barnard (1938), and Likert (1961) each in their own way wrote of *power with, cooperative systems, and reciprocal influence* to describe their view of a human relations leadership perspective which considers the acknowledgement of mutual influence. This study builds upon that tradition by identifying such mutually beneficial leader/follower relationships in the context of the fire service.

Both the qualitative data gathered during the site visit interviews, as well as the quantitative findings derived from the Leadership Effectiveness Assessments suggest mutual influence exists between subordinates and their leaders. It would be expected that subordinates' attitudes and behaviors in the organizational setting are shaped, in part, by the leader's influence; however, based upon the statements made by the fire chiefs and their senior staffs, the thought, behavior, and expected reactions of subordinates played a significant role in the formulation of the leaders' approach.

For example, there are numerous references in the context of the human resource frame supporting mutual influence and a call for fire chiefs to keep an open mind, develop openness, seek all viewpoints, listen to your staff, develop and practice inclusive leadership styles, and develop staff cohesiveness. These examples of suggested leadership competencies and strategies identify a signal from the chiefs and their staffs that two way communication is encouraged and critical in order to achieve leadership effectiveness within the department.

The LEA results also identified patterns of mutual influence. The strongest argument for this assertion can be made by examining the results of the tests for association between LEA factors and the subordinates' perceptions of their own productivity, as a result of their current supervisor. In these cases the subordinates were rating their chief's ability to get them to produce more work. Strong relationships ($P < 0.05$) were found to exist between leadership behaviors that support environments of mutual influence, including Team Building Behavior, Relationship Behaviors, and Partner Behavior. The organizational result of these leadership behaviors is an open, contributing, mutually beneficial, and shared power environment where leaders and followers work together to satisfy common goals and needs.

Leadership, although considered in a theoretical sense for this section, becomes practice in the organizational setting. Bolman and Deal (1997) use a frames approach to analyze leadership in the organizational environment. The next section expands upon this approach by suggesting the Performance Frame of Leadership.

The Performance Frame of Leadership

Bolman and Deal's four frames (Human Resource, Symbolic, Structural, and Political) are useful methods to examine the leadership environment and reflect upon the ways fire chiefs can choose to adapt their leadership strategies to become more effective. However, the fire service has at its core a philosophy of performance. To respond quickly, to perform the task safely, effectively, and efficiently are at the heart of every fire

department's mission for emergency service delivery. Therefore, the inclusion of a Performance Frame to extend the suitability of this analytic tool set is appropriate. Adding Performance Leadership as a fifth frame allows one to emphasize this crucial element of organizational purpose.

The elements of the Performance Leadership Frame are as follows. First, performance leaders enable followers to link organizational inputs to outcomes. Second, performance leaders establish means to evaluate organizational productivity. Third, performance leaders effectively connect human resources with production resources. Fourth, performance leaders create relational pathways to allow continual improvements in production.

Performance leaders enable followers to link organizational inputs to outcomes. By making the relationship between organizational inputs and outcomes clear to followers and themselves, performance leaders improve the effectiveness and efficiency of organizational work flow. Firefighters can lose sight of the support work required to maintain a fire department operation.

The lead operational units in a fire department, fire crews, must be supported by the input of resources in payroll, logistics, fleet maintenance, administration, mapping, and many other divisions to be able to focus on their emergency response role. These other inputs are critical in ensuring the readiness of a fire company; yet support units are often not recognized for their contribution when the public's focus is drawn to the emergency responders.

Performance leaders are able to help bridge the gap between field operations and support units by providing data illustrating the costs of operational missions to those providing the service. Without such information, field providers may not recognize the organizational costs of producing a service. For example, given the knowledge that prehospital medications and medical supplies are quite expensive and most often have expiration dates, field providers can better rotate stock, develop more efficient inventory methods, and ensure items eligible for cost recovery are accounted for on Patient Care Reports.

Performance leaders establish means to evaluate organizational productivity. Assessing the productivity of an agency is more than just counting units of work product; it is first, clarifying agency goals and objectives, and then, identifying significant input resources, production activities, outputs, intermediate outcomes, and outcomes. By identifying the individual elements of production, from input through outcome, the performance leader examines the process as an interconnected system and evaluates each component for production effectiveness and efficiency. For example, if fire administrators examine the flow of a 9-1-1 medical aid call from identification of need through delivery of the patient at the emergency department, then critical production steps along the way can be examined for improvement.

Performance leaders effectively connect human resources with production resources. Many fire departments use committees of firefighters

to help design and improve the very tools they use. Using end users to provide design input on production resources such as computer software, fire station designs, fire apparatus features, and the safety gear worn by firefighters is an essential factor in connecting human resources to production resources. The better the relationship between human beings and the tools they employ in the delivery of their services, the better the operation.

The unique and demanding characteristics of emergency work have called on those in the field to continually develop safer and more effective means of performing the work. Performance leaders establish and encourage followers to participate in groups tasked with improving production tools and resource utilization.

Performance leaders create relational pathways to allow continual improvements in production. Relational pathways are communication and cooperation networks between organizational units and individuals. These horizontal and vertical pathways allow creativity and innovation to flow between production points and help break down traditional barriers to communication between organizational levels. Performance leaders establish relational pathways by emphasizing and supporting cross-divisional collaboration.

Contrary to the stovepipe mentality seen in some organizations, where organizational units tend to operate without a sharing of ideas, solutions, resources or common objectives, relational pathways provide a means for

managers and workers to build seamlessly upon each other's strengths by sharing information, pooling resources and developing strategies that complement rather than compete. Performance leaders establish relational pathways for themselves as well, and encourage cooperative relationships among their followers to build a collaborative and learning organization. Where organizational units cooperate and collaborate, improvements in production will be seen, as well.

This section has offered four ways the Performance Frame can be used to view leadership practice and suggests its addition to the Human Resources, Symbolic, Structural, and Political Frames. When looking at the responses from the fire chief and staff interviews under these five frames some method of order needed to be developed. Ultimately, a system of organization which placed the comments into one of five categories arose.

The Five Frame Leadership Strategy Approach

This study developed a method to examine and operationalize leadership strategies through a five frame matrix which includes Leader Self-development, Leadership Approach, Member Development, Department Organizational Development, and the Department's Role in the Community. These leadership strategy categories are intended to be used in conjunction with the five analytic frames presented above. In doing so, one may be able to focus leadership strategies under the five distinct analytic frames. Improving one's leadership effectiveness in one area can have a positive affect in another.

To improve in the practice of leadership, this study suggests one first look within. Begin by examining your own leadership attitudes, perspectives, strengths, and opportunities for development. Some of the areas the chiefs identify as the most important are personal leadership characteristics and leadership activities which include honesty, accountability, responsibility, an emotional commitment to the department, personal health and fitness, demonstrate high values, develop and articulate a vision, and lead by example.

Next, examine your leadership approach. How do you practice leadership in your organization? The use of the LEA or another instrument to conduct a 360 degree assessment may be in order. Reflect on your own skill sets and the circumstances that seem to allow you to be at the top of your game, and those that cause you the most challenge. This study has placed a great deal of emphasis on relationships. Are you actively developing your ability to listen, see, and incorporate the perspective of others into your interpersonal relationships?

For one's leadership approach, the chiefs suggest practicing inclusive leadership styles, practicing the family metaphor, communicating expectations clearly, maintaining integrity in leadership, developing your management team, listening to your staff, using goals and objectives to drive action, consulting with labor, making consistent decisions, developing a long-term vision, focusing energies on results, and developing strategies that foster a performance perspective.

The third category of leadership strategies focuses on developing those around you. Few of the departments had any organized succession planning activities, yet nearly all were concerned about leadership vacuums when key people left the organization. Who will fill the leadership void? Member development first includes finding the talent in the organization. Then, offering training and opportunities to practice communication, interpersonal skills, networking, working collaboratively across disciplines, and developing entrepreneurial partnerships. Additionally, develop your staff in the use of analytic tools and competencies and measures to sustain focus on many fronts.

The fourth area suggested for leadership strategies targets the department's organizational development. In this category chiefs are encouraged to focus on areas which will institutionalize behavior, mold organizational culture, support organizational strength through structural activities, reinforce intergovernmental relationships, and adopt performance measurement as a way of life.

Finally, examining the nexus between executive leadership and the department's role in the community elicits leader activities that place the fire chief as a linking-pin between the department and the community. Leadership activities in this area strengthen the role of the department in the community and establish it as a responsible partner with community groups and businesses, rather than merely a "responder into the community" for

emergency incident mitigation, retreating back to the security of the station house upon completion of the call.

This section has presented a five frame Leadership Strategy Approach which offers a method to examine leadership practice from the fire chief's perspective. The next section drills down into the quantitative results of this study for sense making about the relationships between two fire chief characteristics, leadership effectiveness scores, and organizational productivity.

Statistical tests between fire chief characteristics, tenure and education, and LEA factors identified several disturbing negative relationships. These findings should cause some consternation among senior fire chiefs, as well as those who have sought higher education as a means to improve leadership and managerial practice. These findings cause one to ask,"Why is it that longer tenure and more advanced education may cause lower leadership effectiveness ratings among subordinates?"

First, considering the low numbers of fire chiefs participating in this study, the influence of one or two scores can have a dramatic effect on statistical results, causing false indicators. Second, there may be a third or fourth variable not considered in this Dissertation having a spurious influence. There is a danger in any social science investigation of these effects. Because of this possibility, caution is given about generalizing these results, especially in this area of the study. Still, there may be some reasonable explanations for these findings. The researcher will provide other

possible rationale. Each of these variable relationships will be examined separately.

Fire chief characteristics and leadership effectiveness

Tenure was shown to have a negative relationship on Empowerment Behaviors, Calming Influence, and Friend. As noted previously, all of the leadership scores in these areas had downward trends until the five to nine year point. At that point Empowerment Behaviors and Calming Influence began to rise, while Friend progressed downward even more dramatically. It could be that as a fire chief gains time in an organization, phases in the relationships with subordinates go through evolutionary changes such as a "honeymoon period" where both the chief and his/her senior staff are learning of each others' boundaries, strengths, and weaknesses. Once past this initial phase, leadership effectiveness in these areas begins to decline.

Another possible explanation for the declining scores may be that due to the high stress nature of the job and its effect on relationships, making difficult and sometimes unpopular decisions, or making promotions of one subordinate over another, a decline in these LEA factors is seen. However, hope being eternal; for past the five to nine year mark scores appear to improve. This could be caused by a rotation in staff, acceptance of the leader for who she or he is, or the recognition that after this period of time some of the long-term goals and objectives of the administration are coming to fruition for the good of the organization.

The second fire chief characteristic, education, showed negative relationships with Relationship Behaviors, Character, Straightforwardness, Partner, and Friend Behaviors. This could show that fire chiefs who achieve higher levels of education rely more heavily on their technical competencies in the practice of their job, rather than on their interpersonal skills. It could also show that subordinates do not as easily relate to or identify with fire chiefs who have advanced degrees. Another explanation is that fire chiefs who do not have college or advanced degrees have developed a much higher set of interpersonal skills to achieve their administrative duties and goals. This study has no proof to offer for any of these explanations other than the personal observations of the researcher.

Fire chief leader effectiveness scores and measures of organizational productivity.

As previously noted, budget dollars spent per capita was used as a proxy for organizational productivity. This input measure was compared to the LEA factors and was found to have significant positive relationships with Relationship Behaviors, Enjoyableness, and Organizational Outreach Behaviors.

In many cases fire chiefs can have significant influence on their operational budget and work diligently to increase their budget share. All of the participants included in this study come from municipalities where competition for available budget dollars among city departments is an annual practice. Personal interaction and well-developed relationships on behalf of

the fire chief with council members, city managers, and budget directors can have a positive impact on fire department budget dollars. The three sets of behaviors positively associated with budget dollars spent per capita are ones which would strengthen such activities.

The second measure of organizational productivity used was the number of residential structure fires per 1,000 population served. This intermediate outcome measure was compared to the LEA factors and found to have positive relationships with Mission Oriented Behaviors, Dependability, Follower, and Industriousness Behaviors. As mentioned before, having high leadership effectiveness scores related to high rates of fire is not a desirable finding. This finding may show that regardless of the effectiveness of a fire chief on programmatic areas of the department the impact on the rate of fire is not significant. Given that most residential structure fires are the result of improper use of appliances with a heating source, the misuse of combustible materials, and arson, a better productivity indicator should be used.

For example, the percentage of residential and commercial structure fires controlled at the room of origin or the floor of origin may provide a better measure of a fire chiefs' influence over the department's service delivery. There are performance measures in the area of Emergency Medical Services which focus on the impact of Advanced Life Support procedures on life saves that will have equally beneficial uses. Although these performance measures

are included in the ICMA Comparative Performance Studies, the data are still too scarce to be useful across the population considered for this study.

This section has attempted to provide some explanation for the relationships found between fire chief characteristics, the fire chief's LEA scores, and measures of organizational productivity. The next section of this chapter concludes the Dissertation by offering suggestions for future research in this area.

Recommendations for Future Research

Based on the limitations and scope of this Dissertation, the following areas for future research are offered.

1. This study gathered biographical data on the participants during the LEA administration. Some of this data was collected as a range, i.e. "age____25-29 years." However, it would have been helpful to have initially collected complete interval data on age, years in the fire service, and years as fire chief in this organization to better focus on break points in the data.

2. This researcher initially depended upon the ICMA Comparative Performance Reports to gather secondary data. However, since ICMA chooses to illustrate this data in varying formats year to year, it was not possible to conduct cross-year comparisons without access to the raw data. ICMA raw data is only available to agencies currently participating in their study. To expedite the data collection process, it would be helpful to collect

organizational performance data during the site visit from each participant using the ICMA data collection criteria.

3. This study has shown a need for fire chiefs to be actively developing their leadership capacity at the staff level, within the organization, and as the department's representative in the community. It would be very interesting to select fire chiefs from this study who achieved high LEA scores and conduct interviews with these individuals to determine, in depth, their personal leadership approach and methods.

4. The connection between leadership effectiveness and organizational productivity remains illusive. This study's design enabled a "slice in time" look at leadership effectiveness, through the use of the LEA and measures of organizational productivity. However, a stronger design may be to use the data collected in this study as a benchmark and continue examining a subset of fire chiefs over time to determine how organizational productivity variables change as the leader has had an opportunity to implement his/her programmatic efforts.

Conclusion

Public leaders have an awesome responsibility to help guide their organizations in ways which accomplish the public good in a broad manner. Compared to the great works in leadership that have come before, this Dissertation offers a speck of further understanding on the topic. Yet, upon close examination of every mountain, a speck of earth contributes its all.

BIBLIOGRAPHY

Ackoff, Russell L. "Transformational Leadership." *Strategy and Leadership* Vol. 27 No. 1 (1999): 20-25.

Affholter, Dennis P. "Outcome Monitoring." In Joseph S. Wholey, Harry P. Hatry, and Kathryn E. Newcomer, Eds. *Handbook of Practical program Evaluation*. San Francisco: Jossey-Bass, 1994.

Ammons, David N. "A Proper Mentality for Benchmarking." *Public Administration Review*, March/April, Vol. 59 No. 2 (1999): 105-109.

Argyris, Chris. *Integrating the Individual and the Organization*. New York: Wiley, 1964.

Barnard, Chester I. *The Functions of the Executive, 2nd Ed.* Cambridge: Harvard University, 1968.

Bass, Bernard M. *Leadership and Performance Beyond Expectations*. The Free Press: New York, 1985.

___. "The Ethics of Transformational Leadership." Center for leadership Studies: School of management, State University of New York, 1996.

___. "Personal Selling and Transactional/Transformational Leadership." *The Journal of Personal Selling and Sales Management* Vol. 17 No. 3 (1997):19-28.

Bass, Bernard M. and Bruce J. Avolio. "Transformational Leadership and Organizational Culture." *Public Administration Quarterly* Vol. 17 No. 1 (1993):112.

Behn, Robert D. *Leadership Counts: Lessons for public managers from the Massachusetts welfare, training, and employment program.* Harvard University Press: Cambridge, 1991.

___. "What Right do Public Leaders Have to Lead?" *Public Administrative Review.* Vol. 58 May/June (1998), 209-224.

Bennis, Warren. *On Becoming a Leader*. Reading, Massachusetts: Perseus, 1989.

Bennis, Warren and Burt Nanus. *Leaders: The strategies for taking charge*. New York: Harper and Row, 1995.

Berry, Francis S., Richard Chackerian, and Barton Wechsler. "Reinventing Government: Lessons from a state capital." In H. George Frederickson and Jocelyn M. Johnston, Eds. *Public Management Reform and Innovation: Research, theory and application.* Tuscaloosa, Alabama: The University of Alabama, 1999.

Blunt, Ray and Hugh Clark . "Growing Public Service Leaders." *Public Manager* Vol. 26 No. 2 (1997): 41-45.

Bolman, Lee G. and Terrance E. Deal. *Reframing Organizations: Artistry, choice, and leadership.* San Francisco; Jossey-Bass, 1997.

Borgatta, Edgar F. and George W. Bohrnstedt. "Levels of measurement: Once over again." Sociological Methods and Research. Vol. 9 (1980): 147-160.

Brooks, Paul D. "Self-assessment: Your best defense." *Fire Engineering.* March (1997): 94-100.

Bruegman, Randy R. and Ronny J. Coleman. "Self Assessment: Safeguarding the Future." *Fire Engineering* . March (1997): 83-94.

Bruder, Kenneth A. and Edward M. Gray. "Public-sector Benchmarking: A practical approach." *Public Management*. September (1994).

Brunacini, Alan V. "What You Got is What You Get." *Fire Economics.* July (2000): 64.

Burns, Bernard M. *Leadership*. Harper and Row: New York, 1978.

Chapman, Jeffrey I. "Proposition 13: Some unintended consequences." *Public Policy Institute of California*: San Francisco, 1998.

Coe, Charles 1999. "Local Government Benchmarking: Lessons from two major multi-government efforts." *Public Administration Review*, March/April, Vol. 59 Number 2 (1999): 110-123.

Cohen, Steven A. "Defining and Measuring Effectiveness in Public Management." *Public Productivity and Management Review* Vol. 17 No. 1(1993): 45-56.

Coleman, Ronny J. "Four Big Political A's and 10 Scenarios." *Fire Chief Magazine* October (1996a): 28-33.

___. "The perils of Doing Your job Too Well." *Fire Chief Magazine* November (1996b): 37-39.

___. "It's the Fire service, Not the Fire Business." *Fire Chief Magazine* April (1997a): 42-43.

___. "You're in Command, but do you Lead?" *Fire Chief Magazine* March (1997b): 32-33.

Collins, Jim. "Aligning Action and Values." *Leader to Leader*. Premier Edition (1996): 19-24.

Commission on Fire Accreditation International. *Fire and Emergency Service Self-Assessment Manual.* Self Published: Fairfax, Virginia, 1997.

Cook, Brian J. Politics, Political leadership, and Public Management." *Public Administration Review*, Vol. 58 No. 3 (1998); 225-230.

Cooper, Terry L. *The Responsible Administrator: An approach to ethics for the administrative role.* Jossey-Bass: San Francisco, 1990.

Deluga, Ronald J. "Leader-Member Exchange Quality and Effectiveness Ratings." Group and Organization Management Vol. 23 No. 2 (1998):189-216.

DiPoli, Robert A. "Fire Chief Longevity: Past and present." (an applied research project submitted to the National Fire Academy, Emmittsburg, MD), 1994.

Fischer, Richard. "An Overview of Performance Measurement." *Public Management*. September (1994).

Follett, Mary Parker. "The Giving of Orders". In Henry C. Metcalf & L. Urwick Eds., *Dynamic Administration: The Collected Papers of Mary Parker Follett*. New York: Harper and Brothers, (1925) 1941.

___. "Leader and Expert." In Henry C. Metcalf & L. Urwick Eds., Dynamic Administration: The Collected Papers of Mary Parker Follett. New York: Harper and Brothers, (1927) 1941.

___. "The Process of Control". In Luther Gulick & L. Urwick Eds., *Papers on the Science of Administration*. New York: Institute of Public Administration, 1932.

Fox, Richard L. and Robert A. Schumann. Gender and Local Government: A comparison of women and men city managers." *Public Administration Review* Vol. 59 May/June. No.3 (1999): 231-242.

Frant, Howard L. "Danger, Chimeras Ahead: Comment on Terry." *Public Administration Review* Vol. 59 May/June. No. 3 (1999): 268-271.

Frederickson, H. George. *The Spirit of Public Administration*. San Francisco: Jossey-Bass, 1997.

Gardner, John W. *On Leadership*. New York: The Free Press, 1990.

Gawthrop, Louis C. *Public Service and Democracy: Ethical imperatives for the 21st century*. New York: Chatham House, 1998.

Gilbert, G. Ronald. "Age and Leadership Effectiveness: From the perceptions of the follower." *Human Resource Management* Vol. 29 No. 2 (1990): 187-197.

Gilbert, G. Ronald, Edward L. Hannan, and James J. Flaggert. "Is Smoking Detrimental to Effective Supervision?" *Journal of Applied Social Psychology* Vol. 30 August. No. 8 (2000): 1551-1569.

Goleman, Daniel. "Leadership That Gets Results." *Harvard Business Review* March/April (2000): 78-90.

Graen, George. B. and Mary Uhl-Bien. "Relationship-based Approach to Leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective." *Leadership Quarterly* Vol. 6 No. 2 (1995): 219-247.

Granito, John. "The Next Generation." In Joseph R. Bachtler and Thomas F. Brennan Eds., *The Fire Chief's Handbook*. Saddlebrook, N.J. (1995): Fire Engineering.

Gruenebaum, Jane. "Leadership Development in Times of Change." *Public Manager* Vol. 26 No. 4 (1997/98): 45-48.

Gulick, Luther. "Notes on the Theory of Organization." In Jay M. Shafritz and Albert C. Hyde, Eds. *Classics of Public Administration*. New York: Harcourt Brace College, 1937.

Hatry, Harry, Craig Gerhart, and Martha Marshall. "Eleven Ways to Make Performance Measurement More Useful to Public Managers." *Public Management*. September (1994).

Hersey, Paul and Kenneth H. Blanchard. *Management of organizational Behavior: Utilizing human resources, 5th Ed.* Englewood Cliffs, NJ: Prentice Hall, 1988.

Hesselbein, Frances, Marshall Goldsmith, and Richard Beckhard. *The Leader of the Future: New visions, strategies, and practices for the next era.* Jossey-Bass: San Francisco, 1996.

Hyde, A.C. "Managing Change-Changing Management: Rethinking the roles of public executives." *The Public Manager*, Vol. 26 (1) Spring (1997); 7-12.

ICMA. *Benchmarking: Achieving superior performance in fire and emergency medical services*. Washington: Management Information Services, ICMA, 1993.

___. *Comparative Performance Measurement: FY 1995 data report.* Washington: ICMA Center for Performance Management, 1996.

___. *Comparative Performance Measurement: FY 1996 data report.* Washington: ICMA Center for Performance Management, 1997.

___. *Comparative Performance Measurement: FY 1997 data report.* Washington: ICMA Center for Performance Management, 1998.

___. *Comparative Performance Measurement: FY 1998 data report.* Washington: ICMA Center for Performance Management, 1999.

___. *Comparative Performance Measurement: FY 1999 data report.* Washington: ICMA Center for Performance Management, 2000.

___. *Comparative Performance Measurement: FY 2000 data report.* Washington: ICMA Center for Performance Management, 2001.

Judge, William Q. *The Leader's Shadow: Exploring and developing executive character.* Thousand Oaks, CA: Sage Publications, Inc, 1999.

Kaplan, Abraham. *The Conduct of Inquiry: Methodology for behavioral science.* New York: Harper and Row, 1963.

Kayworth, Timothy R. and Dorothy E. Leidner . "Leadership Effectiveness in Global Virtual Teams." *Journal of Management Information Systems* Vol.18 No. 3 (2002):17-40.

Kettl, Donald F. 1997. "The Global Revolution in Public Management: Driving themes, missing links." *Journal of Public Analysis and Management*, Vol. 16 No.3 (1997); 446-462.

Kettl, Donald, F and H. Brinton Milward. *The State of Public Management.* Baltimore: The John Hopkins University, 1996.

Kirlin, John J. *The Political Economy of Fiscal Limits*. Lexington, MA: Lexington Books, 1982.

___. "The Big Question of Public Administration in a Democracy." *Public Administration Review*, Vol. 56 September/October (1996): 416-424.

Kohler, Jerry W. and Joseph M. Pankowski. *Transformational Leadership in Government.* Delray Beach, FL: St. Lucie, 1997.

Kolb, Judith A. "Leader Behaviors Affecting team Performance: Similarities and differences between leader/member assessments." *The Journal of Business Communication* Vol. 32 No. 3 (1995):233-246.

Kopczynski, Mary and Michael Lombardo. "Comparative Performance Measurement: Insights and lessons learned from a consortium effort." Public Administration Review, March/April, Vol. 59 Number 2 (1999):124-134.

Kotter, John P. "What Leaders Really Do?" *Harvard Business Review.* May/June (1990): 103-111.

Kouzes, James M. and Barry Z. Posner. *The Leadership Challenge: How to keep getting extraordinary things done in organizations.* Jossey-Bass: San Francisco, 1995.

Krantz, James and Thomas N. Gilmore. "The Splitting of Leadership and Management as a Social Defense." *Human Relations*, Vol. 43, No. 2 (1990): 183-204.

Lavoie, Ken. "Justifying Your Department's Existence is a Full-time Job." *Fire Chief*, August 9 (1995): 60-67.

Levin, Martin A. and Mary Bryna Sanger. *Making Government Work: How entrepreneurial executives turn bright ideas into real results*. San Francisco: Jossey-Bass, 1994.

Lichtenstein, Benjamin M., Beverly A. Smith, and William R. Torbert. "Leadership and Ethical Development: Balancing light and shadow." *Business Ethics Quarterly* Vol. 5 No. 1 (1995):97-116.

Likert, Rensis. *New Patterns of Management*. New York: McGraw-Hill, 1961.

___. *The Human Organization: Its management and value.* New York: McGraw-Hill, 1967.

Likert, Rensis and Jane Likert. *New ways of Managing Conflict*. New York: McGraw-Hill, 1976.

Luke, Jeffrey S. *Catalytic leadership: Strategies for an interconnected world*. San Francisco: Jossey-Bass, 1998.

Luthy, John. "Leaving a Leadership legacy." *Public Management* Vol. 82 No. 9 (2000):18-22.

Lynn, Laurence E. *Public Management as Art, Science, and Profession*. Chatham, N.J.: Chatham House, 1996.

Machiavelli, Niccolo. *The Prince*. London: Penguin, 1995.

Masi, Ralph J. and Robert A. Cooke. "Effects of Transformational Leadership on Subordinate Motivation, Empowering Norms, and Organizational Productivity." *International Journal of Organizational Analysis* Vol. 8 No. 1 (2000): 16-47.

Maslow, Abraham. "A Theory of Human Motivation." In *Classics of Organization Theory 4th edition*, Jay M. Shafritz and J. Steven Ott Eds.. New York: Harcourt Brace College, 1943.

McGregor, Douglas M. "The Human Side of Enterprise." In *Classics of Organization Theory 4th edition*, Jay M. Shafritz and J. Steven Ott Eds.. New York: Harcourt Brace College, 1957.

Mills, C. Wright. *The Sociological Imagination*. London: Oxford University, 1959.

Mooney, James D. and Alan C. Reiley. *The Principles of Organization.* New York: Harper and Row, 1939.

Moore, Mark H. *Creating Public Value: Strategic management in government*. Cambridge, MA: Harvard University, 1995.

Nalbandian, John. "Facilitating Community, Enabling Democracy: New roles for local government managers." *Public Administration Review* Vol. 59 May/June. No. 3 (1999): 187-197.

National Performance Review. *From Red Tape to Results: Creating a government that works better and costs less.* Washington D.C.: U.S. Government Printing Office, 1993.

Northouse, Peter G. *Leadership: Theory and practice*. Thousand Oaks, CA: Sage Publications, Inc, 2001.

Osborne, David and Ted Gaebler. *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector from Schoolhouse to Statehouse, City Hall to the Pentagon.* Reading, Mass.: Addison-Wesley, 1992.

Osborne, David and Peter Plastrik. *Banishing Bureaucracy: The Five Strategies for Reinventing Government.* Reading, Mass.: Addison-Wesley, 1997.

Peters, B. Guy. *Four Emerging Models of Governance*. Lawrence, KS: University Press of Kansas, 1996.

Peters, Thomas J., and Robert H. Waterman. *In Search of Excellence*. New York: Harper-Collins, 1982.

Phillips, Donald T. Lincoln on Leadership: Executive strategies for tough times. New York: Warner, 1993.

Poister, Theodore, and Gregory Streib. "Performance Measurement in Municipal Government: Assessing the state of practice." *Public Administration Review*. Vol.59, No. 4 July/August (1999): 325-335.

Radin, Beryl, A. "Managing Across Boundaries." In Donald F. Kettl and H. Brinton Milward Eds. *The State of Public Management*. The John Hopkins University Press: Baltimore, 1997.

Rago, William V. "Struggles in Transformation: A study in TQM, leadership, and organizational culture in a government agency." *Public Administration Review.* Vol. 56, No. 3 May/June (1996): 227-234.

Rainey, Hal G. and Steven A. Watson. "Transformational Leadership and Middle Management: Towards a role for mere mortals." International Journal of Public Administration Vol. 19 No.6 (1996): 763-800.

Schumacher, Joe. *Fire Services Today.* Edited by Gerard J. Hoetmer. Washington D.C.: International City/County Managers Association, 1996.

Schwartz, Barry. "George Washington and the Whig Conception of Heroic Leadership." *American Sociological Review* Vol. 48 February (1982): 18-33.

Seeth, Randall G and Wallace R. Johnston. "The Effective Leader as a Link Between Tasks and People." *S.A.M. Advanced Management Journal* Vol. 61 No. 2 (1996): 16-23.

Silverthorne, Colin and Ting-Hsin Wang. "Situational Leadership Style as a Predictor of Success and Productivity Among Taiwanese Business Organizations." *The Journal of Psychology* Vol. 135 No. 4 (2001): 399-412.

Terry, Larry D. "Administrative Leadership, Neo-Managerialism, and the Public Management Movement." *Public Administration Review* Vol. 58 May/June. No.3 (1998): 194-200.

___. "From Greek Mythology to the Real World of the New Public Management and Democratic Governance (Terry responds)." *Public Administration Review* Vol. 59 May/June. No. 3 (1999): 272-277.

Tichy, Noel M. and David O. Ulrich. "The Leadership Challenge:A call for the transformational leader." In *The Organizational Behavior Reader*. David A. Kolb, Irwin M. Rubin, and Joyce S. Osland Editors. Englewood Cliffs, N.J.: Prentice Hall, 1984.

Tichy, Noel M. and Mary A. Devanna. *The Transformational Leader*. John Wiley and Sons: New York, 1986.

Valle, Matthew. "Crisis, Culture, and Charisma: The new leader's work in public organizations." *Public Personnel Management* Vol. 28 No. 2 (1999): 245-257.

Waldman, David A. and Francis J. Yammarino. "CEO Charismatic Leadership: Levels-of-management and levels-of-analysis effects." *Academy of Management Review* Vol. 24 No. 2 (1999):266-286.

Waldman, David A., Gabriel G. Ramirez, Robert J. House, and Phanish Puranam. "Does Leadership Matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty." *Academy of Management Journal* Vol. 44 No. 1 (2001): 134-143.

Weber, Max. *From Max Weber*. H.H. Gerth and C. Wright Mills, eds. New York: Oxford University Press, 1946.

___. Bureaucracy. In Jay M. Shafritz and Albert C. Hyde Eds. *Classics of Public Administration 3rd Ed.* New York: Harcourt Brace College, 1992.

Wheeland, Craig M. "Council Evaluation of the City Manager's Performance: An inventory of methods." In International City/County Management Association's *Municipal Yearbook: 2002*. Washington, DC: International City/County Management Association, 2002.

Wholey, Joseph S. "Performance Based Management." *Public Productivity and Management Review*. Vol. 22, No. 3 March (1999): 288-307.

Williams, Ruth L. and Joseph P. Cothrel. "Building Tomorrows Leaders Today." *Strategy and Leadership* Vol. 25 No. 5 (1997): 16-22.

Wray, Lyle D. and Jody A. Hauer. "Best Practices Reviews for Local Government: Identifying and sharing better ideas on public services." *Public Management*. January (1996).

Yukl, Gary. "Managerial Leadership: A review of theory and research." *Journal of Management* Vol. 15, No. 2 (1989): 251-289.

___. *Leadership in Organizations.* Prentice Hall: Upper Saddle River, NJ, 1998.

APPENDIX A
INTRODUCTORY LETTER TO FIRE CHIEFS

Participant name
Department
Address

Date

Dear Chief XX,

I believe the development of strong leaders for tomorrow's fire service is one of the most important activities we can undertake. As a fire chief and leader of a California fire department, I believe you can greatly contribute to that endeavor. I am asking for your assistance in a research project to complete my dissertation work at the University of Southern California. My terminal degree is a Doctorate of Public Administration. The dissertation is the final step in this achievement.

I am studying the relationship between leadership at the executive level and organization performance in California fire departments. My hope is to identify executive leadership characteristics and activities that produce high performing organizations.

I selected the XX Fire Department because your jurisdiction has been participating in the International City/County Managers Association "Comparative Performance Measurement. This study provides several indicators of organizational performance outputs and outcomes that I am using in my research.

I am using a scientifically based leadership survey instrument that assesses an executive's leadership effectiveness in mission accomplishment, empowerment, relationship, and team builder behaviors. Chief XX, I am asking your permission to administer the survey to you and to those who are directly under your supervision. I can either visit your organization and administer the instrument directly to your staff during a meeting or send you copies of the survey with administration instructions and a short video introduction. The survey generally takes about 15-20 minutes to complete and there will be no cost to your agency. I will provide all materials necessary. Additionally, I will provide a copy of my completed research to your agency upon completion and a site visit presentation of its findings, should you wish one.

I will be contacting you in about one week to determine your availability and discuss a time convenient for your staff to complete the survey. I look forward to talking to you in the near future.

Thank you for your consideration of this worthwhile project.

Cordially,

Dan M. Haverty, Assistant Chief
Sacramento Metropolitan Fire District

APPENDIX B
ORIENTATION LETTER TO FIRE CHIEFS AND SENIOR STAFF FOR SURVEYS MAILED TO PARTICIPANTS

Participant name
Department
Address

Date

Dear Chief XX,

Thank you for agreeing to participate in my research on California Fire Service leadership and organizational Performance. Per your request, I have enclosed the materials necessary for you and your staff to complete the "Leadership Effectiveness Assessment" (LEA). Included in this packet are:

- One 3:30 minute orientation video.
- Copies of the LEA (white copies) for all of your executive staff to complete. As a reminder, anyone in your organization that reports directly to you should complete a survey.
- A green colored LEA for you to fill out.
- Return envelopes for each individual to send the completed LEA back to me.

Since our last conversation, I have included a few pages on my Department's web site to provide ongoing information on this project's progress. I encourage you and your staff to visit the site at www.smfd.ca.gov/pubed.htm for more detailed information on the study.

Again, if you are interested in my results, I would be happy to share those findings with you and your staff upon completion of the Dissertation. If I can be of further assistance, please give me a call at _____ or via e-mail at _____.

Cordially,

Dan M. Haverty, Assistant Chief
Sacramento Metropolitan Fire District

APPENDIX C

LEADERSHIP EFFECTIVENESS ASSESSMENT (LEAb)
INFORMATION FOR FIRE CHIEF

Chief:

Thank you for taking the time to complete this Leadership Effectiveness Assessment (LEA). Your completion of this survey will greatly aid in the research I am working on to determine the relationship between fire service leadership and organizational performance in fire departments in California. This research is part of my dissertation work leading to a Doctorate in Public Administration at the University of Southern California. The survey should take about 10-12 minutes to complete. This survey assesses an executive's leadership effectiveness in mission accomplishment, empowerment, relationship, and team building behaviors. This is a confidential survey, meaning that neither you nor your organization will receive any reports identifying those completing the LEA. Upon completion of my research, I will provide a copy of the dissertation and make myself available to report back on my findings to all participating departments.

Please follow these instructions to complete and return the LEA. The LEA is proprietary information and copyright protected. It should not be copied or used outside this research.

1. **Read the instructions on page 1.**
2. **Complete the survey.**
3. **Answer the biographical questions on the last two pages.**
4. **Return the assessment to me, or**
5. **Place the survey in the stamped self-addressed envelope provided and mail the survey back to me in Sacramento.**

If you have any questions about this project, please call me at the above numbers or log on to our web site at www.smfd.ca.gov and look for a more detailed description of this research under the Public Education page.

Thank you for your help in this worthwhile project!

Sincerely,

APPENDIX D

LEADERSHIP EFFECTIVENESS ASSESSMENT (LEAa)
INFORMATION FOR SENIOR STAFF MEMBERS

Thank you for taking the time to complete this Leadership Effectiveness Assessment (LEA). Your completion of this survey will greatly aid in the research I am working on to determine the relationship between fire service leadership and organizational performance in fire departments in California. This research is part of my dissertation work leading to a Doctorate in Public Administration at the University of Southern California. The survey should take about 10-12 minutes to complete. This survey assesses an executive's leadership effectiveness in mission accomplishment, empowerment, relationship, and team building behaviors. This is a confidential survey, meaning that neither your Fire Chief nor your organization will receive any reports identifying those completing the LEA. Upon completion of my research, I will provide a copy of the dissertation and make myself available to report back on my findings to all participating departments.

Please follow these instructions to complete and return the LEA. The LEA is proprietary information and copyright protected. It should not be copied or used outside this research.

6. **Read the instructions on page 1.**
7. **Complete the survey.**
8. **Answer the biographical questions on the last two pages.**
9. **Return the assessment to me, or**
10. **Place the survey in the stamped self-addressed envelope provided and mail the survey back to me in Sacramento.**

If you have any questions about this project, please call me at the above numbers or log on to our web site at www.smfd.ca.gov and look for a more detailed description of this research under the Public Education page.

Thank you for your help in this worthwhile project!

Sincerely,

APPENDIX E
EDITED FIELD NOTES FROM FIRE CHIEF AND STAFF INTERVIEWS

Interview with FD No. 2000-1 on December 10, 2000

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- The philosophy of inclusion and participatory management in the City as a whole, and especially within the Department.
- The Chief has taken a diagonal slice through the Department to select diverse representation on numerous topics.
- The vision, mission, and goal statements were driven by Department members. The Chief does not subscribe to creating such important concepts/frameworks for the Department by "coming from on high and bestowing them onto the troops. (The Chief called this the Moses leadership style).

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Apathy in the Fire Service.
- Trouble filling leadership roles.
- Recently had to go to the outside to fill two battalion chief positions because of lack of interest from the Department members.
- Lack of willingness of line officers to accept leadership roles within the Department. There is a lack of incentives for line personnel to make the jump from shift work to days.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Do not take it personally.
- The Fire Chief cannot behave in the same way as a Captain in times of conflict.
- Keep your eye on the ball.
- Know where your organization is going.
- Develop inclusion of members in the process.

Notes:

- The Department is using the Accreditation process to assess their organization.
- The Fire Chief stated that this would allow members to see the needs of particular areas that should be worked on within the Department.
- The City is very wealthy, having about $60 million in reserves. This may soon become a problem because the City may have to do something about excess revenue accumulation.

Interview with FD 2000.2 on December 10, 2000.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- New Records Management System (RMS) for the Department.
- Willingness of the membership to step forward and help with projects when needed, i.e. the Department recently hosted a major Fire Service event. The members put on the entire event and were anxious to talk with visiting fire chiefs about the Department and the Fire Service.
- The good relationship with the City Council and the citizenry. They assess their quality via a City satisfaction survey where the Fire Department leads other Departments consistently. The Fire Department is always in the 90th percentile in terms of satisfaction.
- Moving from a "seat of the pants" or experienced based decision-making model to one, which is drive by data. Recently the Department was asked to move a station by the City Redevelopment Agency. Based on response time data the Department was able to convincingly demonstrate that the fire station should stay in its present location.
- The Fire Department is one of the few City Departments that use strategic goals and reports regularly on the achievement of those goals to the Manager.

Question 2. What are the most challenging leadership or programmatic areas your Department faces ?

- Lack of cooperation from Council to implement modern technology to keep up with current modes of communication and information movement. The Department Administration feels like they are the leaders among City Departments in the demand for this technology, but also feel they are hamstrung by "pulling a plow laden with very conservative Council members" (The Assistant Fire Chief).

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Keep an open mind and "get the big picture" before making decisions because there always two sides to every story.
- Do not personalize issues. The Fire Chief stated that he has witnessed fire Chiefs lose their effectiveness when they begin to

personalize the job. People who complain or attack an issue are usually frustrated with the process not the Chief.

Note:
This Department uses the ICMA data in at least two ways. One, they use it internally to assess their performance. They found that when looking at arson, they were not gathering or reporting information and in some cases gathering incorrect data from unreliable sources. Second, the Chief uses the data when reporting to the City Manager. The use of ICMA data enhances the credibility of the Chief's report.

Interview with FD No. 2000.3 on December 9, 2000.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Working relationships with labor and other Department heads, including the Mayor, as well.
- We struck a contract for services with an Indian nation contingent with the City's boundaries. It is a 5-year contract for services wherein the Tribal Council purchased two engines and a hazardous materials response unit, including all the incidental gear to outfit all the units. The Tribe runs a casino.
- The apparatus replacement program seems to be a star.
- When the Chief came to the Department three and one-half years ago from his position as an operations chief in another state, there was no plan check and little accompanying building inspection. The Chief revitalized the FPB and added a plan checker and inspectors.
- There were two new positions added; an emergency services planner and an administrative analyst.
- The Chief was said to be a people person, not a schmoozer, but could delegate well and people want to work for him.
- He noted the willingness of his membership to step forward and make large improvements with few resources.
- Staff mentioned that the line crews are above average when it comes to service delivery. They use several methods to assess service quality, including post incident surveys, anecdotal stories from citizens, and analysis of incidents.

Question 2. What are the most challenging leadership or programmatic areas your Department faces ?

- The political climate of this community is Chicago style. The meetings are very rough at the Council level. It is not unusual for people to be escorted by force from the lectern by police and/or a sworn member of the Council.
- The Operations Chief said there is a very high potential for a large scale emergency including, a large area that has developed into a fire susceptible canyon. This area is susceptible to severe winds. A portion of the City is in a liquefaction area. A nearby major carries more tons of ground transport that any other pass in the Country. There are two major railways and two major interstate highways running through the City.

- The City has a big arson problem. Three years ago they had greater than 50% arson rate. Now it is lower, but only marginally. However, the Chief has added an arson investigator who is working on the problem. This community has the highest repossession rate in the Country, second to Chicago.

Note:
The Department has not used the ICMA data due to time constraints on the analyst. They intend to use it when staffing permits.

The Fire Chief is going to try to stay in this job for 10 years. He says he has taken care of himself physically and unless the political climate forces him out, he will stay.

He mentioned that three of the lead headhunters told him that it is getting much more difficult to find candidates for Fire Chief positions because of the lack of rewards, i.e. move from shift work to days, decreased overall salary, increased headaches, and heartaches.

Interview with FD No. 2000.4 on December 9, 2000

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- The discussions focused on the prior chiefs of this city and their contribution to the Department. Many of these chiefs were from the outside and had short (3-4) year tenures. The Fire Chief held every position in the Department with this city, except fire marshal. He has been with the City for 29 years. He believes this Department was the first Department to have paramedic engine companies and transporting medics. He served as a paramedic firefighter, engineer, and captain. He believes the paramedic position is a good training ground for other leadership positions, i.e. captain.

- The Fire Chief believes that a fire chief becomes ineffective after 3-4 years.

- He credits the financial stability of the City and especially the current economic boom has being a major reason why his tenure has been productive.

- During the mid 70's the fire chief, at the time, implemented the paramedic program and was give a blank check by the City to do so. This program has had a tremendous positive result in customer satisfaction.
- During the discussion, the Chief reflected back on prior administrations and their chief officer. He credited each one with having a major thrust in moving the Department to where it is today. He cited the paramedic program as a contribution of one administration and internal communication via participatory management with another. He includes participatory management as a major part of his administration. A third major contribution by prior administrations is the addition of squads to be used as primary paramedic response apparatus configuration. However, these units are most beneficial during large-scale disasters when transporting medics are all in use.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- An area of concern for the Fire Chief is the physical demands of the job. He and others stated that the job takes its toll on members of the organization as they progress up the ladder, both physically and

emotionally. “There is a good reason why we don’t have leaders stay beyond the age of 58 or 59, that is because they are worn out.”

- One of the most difficult components the Fire Chief stated about his job was his inability to talk about personnel issues. Because he cannot discuss these issues openly, there is often misunderstanding among the membership.

Interview with FD No. 2001.1 on February 14, 2001.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Increased work quality
- Cohesiveness at the staff level resulting in a “Can do” attitude.
- An ability and a willingness to work together.
- Open discussion between staff members.
- We are not a “paper tiger”, real work gets done.
- We value our employees.
- We have a distinct work ethic, which is different from the City.
- Integrity from the Chief.
- Paramedic program.
- Vegetation management program.
- “What gets measured gets done.”

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Lack of stability in organization following retirements.
- Open testing.
- Loss of personnel due to lower wages (not competitive with other Departments).
- We are losing our roots with the community due to employees who cannot afford to live in the City.
- An example of our loss of alignment with the community is our inability to staff public events.
- The current trend/movement towards a regionalization may lose the Departments tradition and culture.
- There is a loss of cohesiveness between divisions in the City as a result of low employee retention, competitiveness between divisions. These factors relate to the cost of living in this area.
- There is a lack of support from the City in terms of IT and fleet repair.
- The staff questions the loyalty to the Department of the next chief and executive staff members who will probably come from the outside.
- Concern over retention of Department employees.
- Concern over a younger workforce, compared to the age profile of firefighters who came into the organization in the past.
- There is a concern over general safety as related to the younger workforce, firefighters not being from the region and unfamiliar with the City and its problem areas.

- The Chief expressed his concern for his responsibility for the citizens and his firefighters. His concern was very personal. He was worried about every fire death in his City and the worry over possible death or injury of his members.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Value people as a resource and demonstrate and model this value.
- The culture of this organization did not just happen; take the time and effort necessary to learn about it.
- Be fair.
- Focus on the real issues.
- Listen to staff.
- Value staff opinion.
- Value the people.
- Find the talent in this organization.
- Balance the City and the Fire Department, but work for the Fire Department.
- Do not go to the dark side of City management.
- Get a hold of the feeling of the Department…"suck it up!"
- Find and embrace the values of this organization, it history, its culture.
- Develop a vision and transfer that vision through your staff.
- Build a team.

Interview F.D. No. 2001.2 on July 17, 2001.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- The group was proud of the Department's high morale.
- Accountability of accountability to line personnel and line personnel to administration.
- Succession planning programs, Department characteristics.
- The current finances are doing very well.
- Quality people. The Chief stated that the Department's personnel are involved, educated and stay in touch with the Department.
- Stable workforce.
- Commitment from management down.
- General relationship with the City Council.
- New fire station and new engine.
- Community support.
- "Quality over quantity."
- "Care card" program. This is a hand written note to the victims/patient completed by the crew following a response to an incident.
- The Chief noted how impressed he is with the service after the call by his crews.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Personnel issues are the biggest challenges.
- Citywide revenues are a big challenge since 50% of revenues come from sales tax. When sales tax declines there are short-term negative impacts on the Department.
- Senior staff stated that the Fire Chief is very practical when developing the budget. He does not inflate the numbers and because of this forthright practice, the City Manager now knows the budget is real.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Be honest, open, and fair.
- Provide leadership.
- Have the courage to do the right thing for the Department.

- Back down when you are wrong.
- Take responsibility.
- Listen to ideas and include them in your decision making process.
- Include people in the planning process.
- Have boundaries for yourself and your staff – accountability.
- Lead by example

Notes: The group was very complimentary of the Chief and his open, candid, and honest leadership style. The Fire Chief has been in this City for three years having moved from a nearby fire department. The group noted that the Fire Chief's past department had produced four fire chiefs, while none had come from this City. They feel that there were no good examples of a fire chief previously and no succession planning. On the subject of succession planning, the Fire Chief has implemented an out of class engineer, captain preparation program. Now individuals must pass mini competency exams for the two ranks before working in those positions.

Interview with F.D. No. 2002.3 on July 7, 2001

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Most proud of the product and services the Department offers to the community.
- The people on the line.
- Everybody works together at emergency scenes.
- Expansion of services, being more flexible.
- General direction of the Department.
- Emphasis on planning in education, sending members to external training.
- Joint haz mat team with the County.
- Participants in the USAR team and arson investigation team.
- Changes to a participative management style.
- The members stated they feel as though they have a fresh start…"suspend the past."
- The group was concerned about "triggering the organizational memory", but was content as long as things are positive.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- There has been a revolving door in administrative personnel.
- Many changes in policy direction, causing confusion and discontent.
- Sustainability.
- Keeping engaged in the process.
- Developing the parameters to help people operate in.
- Making choices in programs, department characteristics, due to fiscal constraints, lack of knowledge, or lack of time.
- Mandated training.
- Advancement hesitation – line vs. day assignments.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Listen to all sides, and then form your own opinion.
- Forget about the history in the organization, look forward.
- History 101 is important, but truth is not there.
- Look at documented history, i.e. contracts, grievances.

Notes: A discussion ensued on what lead to the recent changes (6 months) in the organization. The members stated that there was a change in the Department name, new Fire Chief hired, open door policy implemented, allowed new ideas to foster, people feel there is an open and honest communication. “The Fire Chief will let you finish your statements.” Members feel the Department is moving forward. The Chief is developing relationships with the Union, Council and City hall.

The Chief stated concern about the Department maintaining its enthusiasm over time. The Department is about to initiate an ALS and transport delivery system and take the proposal to the City Council.

The Department staff indicated there is a positive vision for the future. The past is a real issue for the staff and the general membership. Staff stated that much needed fence mending is occurring.

Interview with FD No. 2001.4 on January 11, 2001.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Aggressive and quick firefighting force.
- Apparatus and their maintenance.
- Working with business from a FPB perspective.
- Random surveys show near perfect customer service.
- The Department has a culture of "being nice."
- Attract highly qualified entry applicants.
- Training center is a priority to members.
- Members believe that with training comes excellence on the fire ground.
- Integrity among the management team, unlike other Departments in the City.
- Good working relationship with labor.
- The Fire Chief places family above Department.
- The Department takes care of their people.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Increasing scope and demand for services without commensurate increase in staff at the management level.
- Ability to attract the bright captains to take position in management.
- Maintaining good working relationship with labor in a time when the external culture of the organization seems to be changing from a focus on "Mrs. Smith" to a focus on "me."

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Maintain integrity of the position.
- Make the right decisions for the right reasons.
- You cannot be a friend to all.
- Develop others by example.
- Balance.
- The community does not exist to have a fire Department; the fire Department is here to serve the needs of the community.
- Develop a clear vision for where the organization is going.
- Work on relationships between management and labor.
- Be honest and inclusive with labor.

Interview with F.D. No. 2001.5 on May 22, 2001

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- The members are especially proud of the Department's history.
- The City uses peer mediation to resolve conflicts.
- The City FD, along with City PD implemented an Emergency Vehicle Operations Course (EVOC), which has reduced accidents involving City employees.
- The group believes there is a focus on people within the organization.
- The group was proud that there were no lawsuits currently with the FD.
- The Department was the first to implement an employee fitness program.
- Specialized programs, Department characteristics, including USAR, heavy rescue, technical rescue, boat program.
- The group is proud of "how they fight fire."
- The group is proud of their EMS.
- Getting out of the traditional firefighting role and moving out of the "norm", especially with tradition.
- In spite of a lack of Department funding, they seem to be still progressing.
- Implemented a "full blown" Advanced Life Support (ALS) program during the depth of a recession.
- Partnerships, such as the Training JPA, EVOC, Dispatch Center.
- Successful in gaining grants for specialized programs, Department characteristics,
- The groups stated they believed the Department was comparable to any fire Department in the nation, and second to none.
- The group was proud of being partners with other organizations without City support.
- The Department has been number one in City customer satisfaction surveys for the past six years.
- The EMS program is helping the community.
- The Department has an officers training program, which teaches officers to be leaders.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- There are difficulties with the relationship with the City Manager stemming from general fund competition.
- There has been mixed support from the City.
- There is a lack of overhead and general staff.
- Morale is low.
- There seems to be a disconnect between cognitive and "hands on" skills at the company level.
- How do we stay number one with stagnant resources?
- The fire stations and facilities need capital improvement work.
- A recent City survey stated that the work circle was OK, but there was a lack of knowledge by the line of what the Department actually does.
- There is a lack of trust between division heads.
- Members find it difficult to work with part-time council people who have short-term visions.
- There is perceived glass ceiling in trying to educate the Council members.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Appoint the people you want to make things happen.
- Focus on developing your staff.
- Catch up with technology.
- Get out of the general fund.
- Make informed decisions.
- Make consistent decisions.
- Develop leaders for the future.
- Promote people and education.
- Continually reevaluate programs.
- Ensure adequate funding.
- Support people.
- Get out and make appearances so you can see the people.
- Do not forget about the administration.

Interview with F.D. No. 2001.6 on July 30, 2001

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Most proud of the variety of services provided by the Department.
- The increase in technical services provided to serve the public.
- This City acts as a catalyst for other emergency response organizations in the region and in the nation.
- We do more with less through our people, budget, and a public/private partnership.
- More visible image to the public due to PIO, labor local, EMS, and community involvement.
- People – before and now; they go to school, train, and retention in Dispatch Center.
- Paramedics take pride in their job.
- The Lifeguard service.
- Everybody talks family…the Department is family.
- Not afraid to take risks.
- Dispatch – The Department serves as a beta test site for a local software company.
- The Chief is a vocal leader.
- Leadership's commitment to diversity. This outlook has expanded to other cities in the region.
- High caliber of people due to, in part, stringent hiring practices.
- The Chief stated he does not look at credentials; it is character, commitment, and diversity of ideas that is most important.
- Creativity-willingness to ask why?
- Willingness to talk it out, which is encouraged by Department leaders.
- The Chief empowers his staff "you make it work.
- "We are in our uniform.' The Chief always wears his uniform and is proud of what it represents.
- We represent the Fire Department and are proud of its whole package. Image counts.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Staff has not kept up with Department needs and demands.
- Unknown danger that can be harmful to firefighters…unexpected dangers.

- The knowledge that a catastrophic event could occur and we did not take some actions to prevent or educate the firefighters, civilians, or the City decision makers ahead of time.
- Not burning people out. When do we take too much of our members time, so they do not have balance in their lives.
- Do we push people in self-medication?
- How do we fill the void of managers who have held critical roles in the Department for a long time?
- The Chief stated, “I can’t provide.”
- Experience void in personnel.
- Dealing with difficult personalities.

Question 3. If you could whisper in the ear of the “next” fire Chief in this Department any advice on leadership, what would you tell her/him?

- Lead, follow, or get out of the way. Never give up.
- Listen to needs.
- Interview every person in the Department for their perspective.
- Empower your staff-staff is only effective to the degree they are empowered by the Chief.
- Be a servant leader-support your staff for their creativity and ability to do the job.
- Give people a clear mission and then let the people do the job.
- Do not be afraid to change your mind.
- Clear and continual communication.
- Do not forget where you came from.
- Be a good active listener, ask questions, seek input from lots of sources, and communicate the decision.
- The Chief stated,” Have the brain, heart, and guts work together to make a decision.” “I wish my colleagues (other Chiefs) had the guts to make a decision and stand up for what they believe in.”

The Fire Chief stated he was so proud of his senior staff because of their willingness to talk openly about problems and present diverse ideas, even when he disagrees with them.

Interview with No. 2001.7 on January 3, 2001.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Department history.
- Office of Emergency Management Services, which developed a Community Preparedness Program.
- Community outreach.
- Set the lead in the City.
- Diverse workforce.
- Takes chances with innovative innovations.
- A leader in the region.
- Participative management.
- Street performance.
- Task accomplishment.
- Citizen acknowledgement.
- Known as a rebel organization.
- The Department is known as being unique and has tradition.
- Old school aggressiveness.
- Proud of personnel and their willingness to sacrifice for the Fire Service.
- Approachable fire chief to the community.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Establishing our priorities; what is our greatest need.
- Changes in personnel and responsibilities.
- To meet the service demands.
- Meeting the mission in spite of downsizing (for 15 years). This also fits into the "proud of" section.
- Lack of long-term vision.
- There is division between city departments.
- Trying to hold different generations within the Department together in spite of age, value, and work ethic differences.
- Retention-the members cannot live in the community, which they serve due to high costs of housing.
- The Department is not up on technology.
- The shift work schedules create different leadership units within the Department.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

- Take care of command staff first and the line second.
- Create the vision.
- Develop goals and objectives that match the vision.
- Learn the culture and history of the organization.
- Learn the landscape of the entire county.
- Be a strong department head at City Council interactions.
- Learn and understand the level of employee involvement and how it works.
- Develop an emotional commitment to the Department.
- Use creativity to retain employees.

Interview with F.D. No. 2001.8 on July 29, 2001

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- The largest fire academy in the Department's history. The Academy runs well.
- The paramedic program. This program is six years old and has seen an evolution to becoming a transporting system. To show the commitment the members of the organization have towards its success, two senior people recently completed paramedic training.
- Consistent support in terms of equipment.
- Two-minute response times (travel time).
- The members stated they believed the Department was free of the conventional borders of a traditional fire Department.
- Still strong community work and a very evident effort and participation by the membership in community relationships.
- The members are trying to achieve the "next level of improvement."
- Specialization in areas of emergency management has shown to open doors for the Department and its members.
- There is a commitment to customer service by the employees.
- One hundred percent ratings in recent city service surveys.

Question 2. What are the most challenging leadership or programmatic areas your Department faces?

- Learning the communication skills necessary to manage and lead.
- One member used the analogy of cancer to explain problem employees in the Department. He stated that the problem employee is like a tumor, often having a "what about me" attitude. Management's response often has to be "chemo treatments" that leave the employee "sick." The difficulty for management is determining the balance between the "medicine and the sickness."
- The Department and City, generally, are seeing an increasing number of members having long commutes to the workplace. They believe this is relating to a changing and negative attitude towards community commitment. Employees traveling longer to get to work most often do not take part in the other activities of the community.
- Although recruitment is a problem surfacing in other bay area cities, this city has not experienced low recruitment.
- The Chief stated that personnel problems are difficult to deal with because they result in a rumor mill that tends to create doubt in the membership over the sincerity and integrity of the organization.

- The Chief noted a shift in the family that “used to be” to the family of today. He stated that 30 years ago all firefighters had a side job where the off day proved to be very hard work in the trades. Now, most firefighters do not have side jobs, instead they have boats and other activities that consume their private life in leisure activities. This shift is a result of many things including general society changes in work ethic and the success of labor unions effecting increased wages, benefits, and lower hours. The labor unions can gain popularity by focusing on the negatives. The results are more laws protecting employees and increased wages and working conditions. The Chief cautioned labor leaders not to manipulate issues to their own benefit.

Question 3. If you could whisper in the ear of the “next” fire Chief in this Department any advice on leadership, what would you tell her/him?

- The people want to hear from the chief.
- Articulate expectations as clear as possible to the members, but especially to staff.
- Empower and delegate the power and authority necessary to group as long as the activities are consistent with the organizational values.
- Clearly, define the values and tie communication to those values.
- Foster the willingness to set a sense of personal responsibility. Instill the desire to do the job without being told to do so.
- Model personal responsibility and accountability.
- Maintain high standards.
- Continually work on communication.

Interview with F.D. No. 2001.9 On July 12, 2001.

Question 1. What programs, Department characteristics, or leadership activities are you most proud of here at XX FD?

- Implementing the new radio system and developing a central dispatch.
- "Added value to the community"
- The addition of paramedic services in 1996. The firefighters found ways to make the program work."
- The paramedic program is a strength as an added service delivery program.
- We are progressive, aggressive, and cutting edge.
- Computers on the apparatus.
- Staffing of truck companies.
- Exercise program for the members.
- We are leaders in the county.
- The last fire chief set down in writing the core values and goals for the Department so that they could not deviate over time.
- Excellent labor/management relations.
- First and only fire department with a one step permit center within their fire prevention bureau.
- Problems can be found out early and worked out.

Note: This was the only senior staff meeting where a bona fide labor representative was present, and present at all senior staff meetings. The Chief noted that is there are personnel issues that need to be discussed among senior staff members only, they will hold that business to the end of the meeting. The labor representative will usually excuse himself and the staff members then can discuss the personnel issue.

The Fire Chief waited until all others has finished their comments and then added the following.

- Being considered a leader in the county was first on his list of successes. He stated that evidence of this is other surrounding fire departments coming to his department for guidance and assistance on program areas.
- Tri-agency Training Officers Association.
- Other agencies using this community's model.
- The Department has a philosophical "us" and "we" attitude. "We work for the community."
- "The community appreciates the organization."
- Continue to provide high quality services.

Question 2. What are the most challenging leadership or programmatic areas you Department faces?

- Short of staffing – This Department has a smaller staff than other surrounding agencies the same size.
- Added programs from the City and Council without added resources.
- No infrastructure to support the Advanced Life Support program.
- Poor long-term planning. The two-year budget is the only long-term plan.
- Operations are isolated from the police department.
- The city manager would like the FD and the PD to work more closely.
- The group stated that there is good informal leadership in the department and a degradation of the formal leadership.
- Captains do not demonstrate leadership.
- Organizationally, its like "jello" – the standards have dropped.
- Non-existent company inspection as a result of increased call volume.
- The competition for time at the company level is significant and has led to dropping programs, like the company inspections.
-

The Chief added:

- The perception of city senior management that the firefighters do not deserve the money (wage) for the job (activity/duties).
- Personnel issues.

Question 3. If you could whisper in the ear of the "next" fire Chief in this Department any advice on leadership, what would you tell her/him?

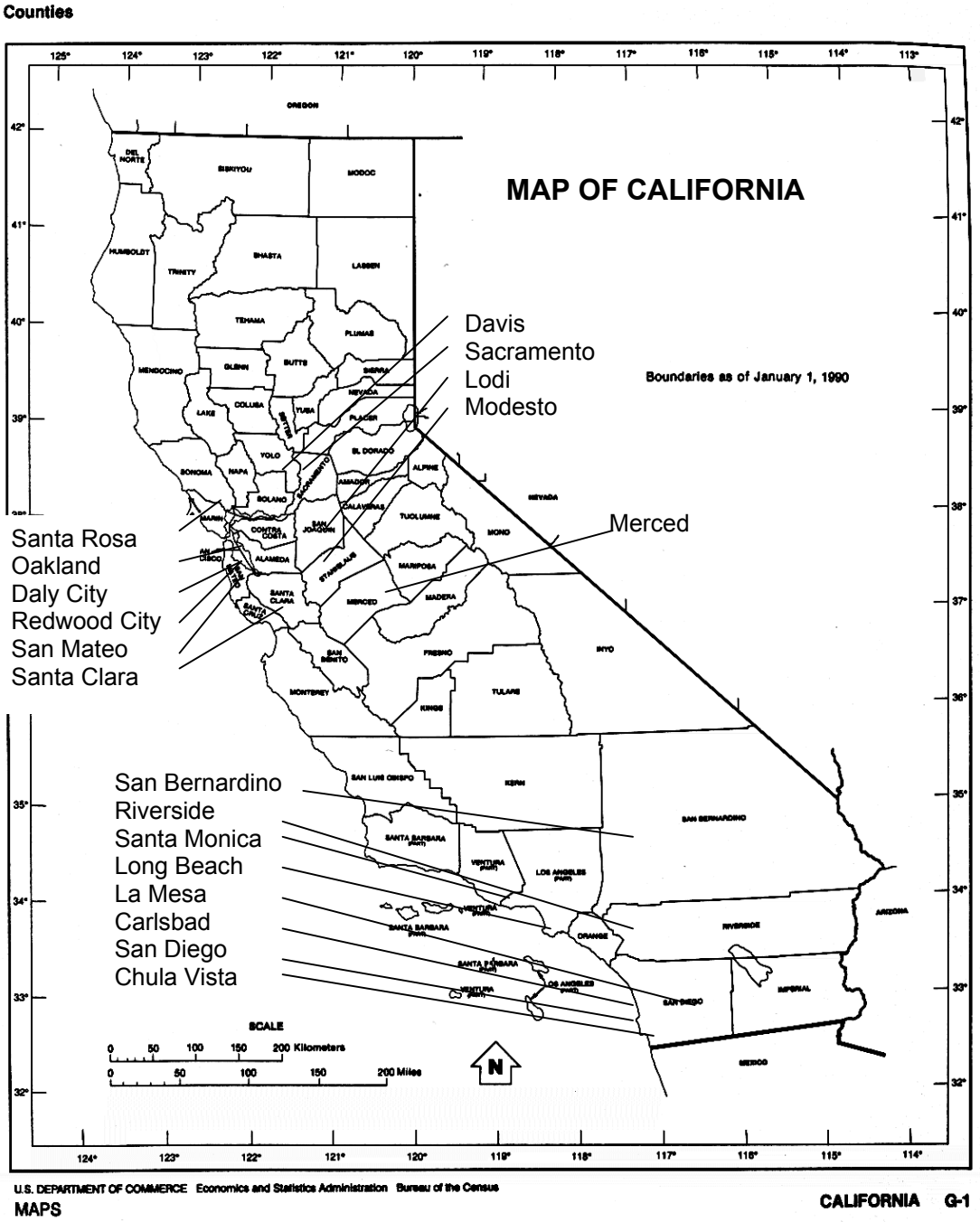
- Listen closely to staff.
- Keep Union advised of issues, but do not let the union run the show.
- Consult with the union.
- Learn about the uniqueness of the area (region.)
- Pay attention to the history of the organization.
- Establish clear expectations with staff and hold people accountable.
- Do not publicly criticize the department.
- It is OK to not know something.
- Respect the department history.
- Look beyond face value.
- Understand how issues have transpired over previous years.
- Attend the significant events to show support for the people and the organization.
- We (staff) exist to support the field people and do not forget it!

The Chief added:

- Be a good listener.
- Respect the organization's traditions and heritage.
- Realize and accept the fact that you are not going to make everybody happy.
- Focus on the ultimate objective – serve the public.
- Talk to everybody in the organization, not just to the senior staff.

APPENDIX F

MAP OF FIRE DEPARTMENTS PARTICIPATING IN STUDY



APPENDIX G

MAJOR LEA FACTOR SCORES

Leader	Leadership Effectiveness Categories					
Sub code	**TB**	**MOB**	**EMP**	**REL**	**CHAR**	(n=)
1	4.2167	4.1512	3.6427	3.7784	4.1667	11
2	4.35	4.5365	3.3844	4.2396	4.5	4
3	3.3717	3.6253	3.4018	3.4187	3.5714	7
4	3.8857	3.9548	3.925	3.5407	3.3333	7
5	4.8	4.4913	4.1925	3.9889	4.9333	5
6	4.1714	4.6088	4.1589	3.3433	4.9048	7
7	3.3	3.1785	3.7531	3.2986	3.5833	5
8	4.375	4.2699	4.1547	3.9401	4.5417	8
9	4.3333	3.6761	4.0542	3.6169	4.3333	6
10	3.6286	4.0944	3.9339	3.7748	4.2381	7
11	3.675	3.1702	3.9547	3.5911	3.5	8
12	4.4667	4.4511	3.9854	3.7222	4.9444	6
13	3.7333	4.2898	3.8417	2.8009	3.7778	3
14	4.3	4.2789	3.875	3.3368	4.5833	4
15	4.35	4.5014	4.3125	3.9462	4.8333	4
16	4.3714	4.1476	3.9241	3.9082	4.2857	14
17	3	3.5612	3.875	3.2315	4	3
18	4.15	4.1529	4.0375	3.9167	4.167	4
19	4.3	3.7216	4.0063	3.5984	4.0556	6
mean score	4.041	4.0453	3.9165	3.6312	4.2238	(N=119)
median	4.2167	4.1512	3.9339	3.6169	4.2381	
std.dev.	0.4686	0.4415	0.2422	0.3405	0.5065	

APPENDIX H

LEA FACTOR SCORES IN MISSION ACCOMPLISHMENT BEHAVIORS

Leader	Mission Accomplishment Behavior				
Sub code	FOR	IND	DEP	AUT	(n=)
1	4.5909	3.8611	4.2778	3.875	11
2	4.5	4.9167	4.1667	4.5625	4
3	3.5844	4.2381	3.7143	2.9643	7
4	3.5455	3.619	4.4762	4.1786	7
5	3.7818	4.6	4.9333	4.65	5
6	3.9351	4.9524	4.9048	4.6429	7
7	2.8182	3.1667	3.6667	3.0625	5
8	3.9545	4.4583	4.2917	4.375	8
9	3.2879	4.2778	3.0556	4.0833	6
10	3.961	4.4762	3.7619	4.1786	7
11	3.2955	2.9167	3.375	3.0938	8
12	3.6515	4.9444	4.6667	4.5417	6
13	3.5758	4.6667	5	3.9167	3
14	3.8864	4.6667	4.25	4.3125	4
15	3.8182	4.5833	4.9167	4.6875	4
16	3.6558	4.5238	4	4.4107	14
17	3.2727	3.1111	4.4444	3.4167	3
18	4.3409	4.3333	3.5	4.4375	4
19	3.303	3.6111	3.8889	4.0833	6
mean score	3.7242	4.2065	4.1732	4.077532	(N=119)
median	3.6558	4.4583	4.25	4.1786	
std.dev.	0.4463	0.6389	0.5713	0.558556	

APPENDIX I

LEA FACTOR SCORES IN EMPOWERMENT BEHAVIORS

Leader	Empowerment Behavior				
Sub code	CAL	DEL	FOL	STR	(n=)
1	3.0833	4.0625	3.6333	3.7917	11
2	2.7	3.25	3.9	3.6875	4
3	3.2286	3.1786	3.6286	3.5714	7
4	3.6857	3.857	4.2286	3.9286	7
5	4.3	3.75	4.52	4.3	5
6	3.9714	3.4286	4.6286	4.6071	7
7	4	3.75	3.45	3.8125	5
8	4.15	3.8125	4.25	4.4063	8
9	3.7333	3.8333	4.4	4.25	6
10	3.8857	3.6429	4.1714	4.0357	7
11	4.125	3.625	3.975	4.0938	8
12	3.9	2.7917	4.6667	4.5833	6
13	3.9333	3	4.2667	4.1667	3
14	3.6	3.5625	4.15	4.1875	4
15	4.55	3.75	4.445	4.5	4
16	3.7857	3.8214	3.9286	4.1607	14
17	3.8667	3.5	4.8	3.3333	3
18	4.1	3.5625	4.3	4.1875	4
19	4.0833	3.7917	4.1042	4.1113	6
mean score	3.8254	3.5774	4.1814	4.0903	(N=119)
median	3.9	3.6429	4.2286	4.1607	
std.dev.	0.4356	0.3233	0.3661	0.3397	

APPENDIX J

LEA FACTOR SCORES IN RELATIONSHIP BEHAVIORS

Leader	Relationship Behavior				
Sub code	PAR	FRI	JOY	OUT	(n=)
1	3.8981	3.1875	4.3889	3.6389	11
2	4.25	3.875	4.4167	4.4167	4
3	3.4603	3.2857	3.2143	3.7143	7
4	3.6508	3.1786	3.4762	3.8571	7
5	4.3556	3.6	4.3333	3.6667	5
6	3.9206	2.9286	3.381	3.1429	7
7	3.6111	3.125	2.9583	3.5	5
8	4	3.2813	4.3125	4.1667	8
9	3.9259	3.2083	4.1111	3.2222	6
10	3.4921	3.0357	4.4286	4.1429	7
11	3.6667	3.4688	3.8958	3.3333	8
12	4.2778	3.5833	3.6389	3.3889	6
13	3.037	2.5	2.8889	2.7778	3
14	3.6389	2.875	3.6667	3.1667	4
15	4.3889	3.4375	4.2083	3.75	4
16	3.9603	3.5893	4.0833	4	14
17	2.8418	3	3.4444	3.6667	3
18	4	4	3.75	3.9167	4
19	3.8329	3.2962	3.8922	3.6835	6
mean score	3.8005	3.2871	3.8152	3.6396	(N=119)
median	3.8981	3.2813	3.8922	3.6667	
std.dev.	0.4113	0.3578	0.4922	0.4064	